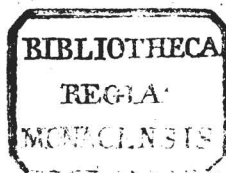


THE
MEDICAL MIRROR;
O. R.,
TREATISE ON THE IMPREGNATION
OF THE
HUMAN FEMALE.
SHEWING
THE ORIGIN OF DISEASES,
AND THE PRINCIPLES OF
LIFE AND DEATH.

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P R E F A C E.

IN this MIRROR, every Patient may behold, not only the true picture of his own disorder, whether hereditary or accidental---chronical or acute---but may also perceive the direct and obvious road to an immediate cure; particularly in relaxed and debilitated constitutions; in lowness of spirits, and weakness of nerves; in Scrophula, Rheumatism, and Gout; and in all complaints which have their source in a tainted or corrupted state of the blood, in vitiated lymph, or in spasmodic affections of the nervous fluid, irritating the muscular system, the brain, and vital organs of the human machine.

The tender and blushing Female, whether married or single, may here discern the admirable structure of her frame, and its natural indispositions, with ample directions how to conduct herself, without wounding her delicacy by communicating her symptoms, her fears, or her apprehensions, to the rude scrutiny of pretended friends.

The country doctor and professional accoucheur, if he dare divest himself of pecuniary views--and the affluent lord or lady of the manor, if fraught with benevolence of heart---may here view a ready means to stop the anguish of the tortured patient; and to relieve the poor diseased

husbandman, whose avocation subjects him alike to the severities of all seasons, and to that infinite variety of sickness, arising from alternate cold, heat, fatigue, and want of proper food and clothing, which is every where felt among our village poor.

Above all, the uncomplaining seaman, who subjected to the ravages of the scurvy, yet cheerfully braves the thunderbolts of war, and in spite of winds and waves keeps from our peaceful shores the devastations of our foe---and the poor soldier, who shrinks not from the sanguinary charge, but, regardless both of danger and death, bleeds in his country's cause, are surely the first objects of medical care and comfort. Their perilous situation, in the present continental war, powerfully solicits us in their favour, draws out our compassion to feel for their sufferings, melts us at every new picture of their distress, and urges us to seek the balmy oil of the good Samaritan, to heal their bleeding wounds. In this Mirror such a balm is discovered, which, if applied in time to gun-shots, stabs, and wounds, may be the means of preserving to their relatives and friends, some thousands of valuable members of society,

THE
MEDICAL MIRROR.

OF THE HUMAN IMPREGNATION.

IN contemplating the Works of Creation and the word of God, unfolded to us by the light of Revelation and Scripture; by analogy, reason, medical experiments, and anatomy, we are enabled to trace the human œconomy farther in her retirement, and deeper in her occult retreat, than some medical men are willing to suppose. Impoverished by a fashionable stile of living, and driven to a necessity of multiplying potions and fees, their object is not to heal, but to nourish the seeds of human infirmity. The truth of this remark has been but too often experienced; and indeed *confessed* by some, in those awful moments, when dissimulation would be vain. Far be it from me to arraign the professional character in its general capacity; it is only the medical locusts that I wish to eradicate; and I am persuaded every good man in the faculty, would with heart and hand assist me in so laudable

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ble a pursuit. It was principally with this view, and to assist private families in the moments of extremity, that I was induced to offer those simple modes of cure and self-preservation, so amply dispensed in my edition of the Family Physician. And my present purpose being to make that invaluable family book still more complete, I shall here explain the nature of human generation, and the principles of animal life, that I may from thence deduce the origin of hereditary diseases, and point out with more facility those which are accidental. And in this Treatise I shall endeavour to furnish my readers with such obvious directions for *eschewing the evil, and choosing the good*, -that, if resolutely followed, will not fail to preserve health and long life, and prove of no small benefit to future generations.

When God created Adam, he planted in him the seeds of that Divine Essence requisite to propagate the human life and soul. Theologists may contradict me; yet I will not so much derogate from the wisdom and omnipotence of the Creator, as to suppose he should watch the impregnation of every human female, and by so many separate and distinct acts of his power, give life, spirit, and soul, to the foetus. The Creator of Man, viewing with unbounded foresight the purposes before him, by one act of his omnipotence, blended in Adam all the faculties of the human and celestial nature; and, without any doubt, when he was formed *one*, in God's express *image*, he possessed the means of propagating, from his own essence, beings like himself. It is here difficult to associate the imperfect ideas of human

man reason with the mechanism of Divine Wisdom ; and yet our conceptions may in some degree unravel the mysteries of nature by causes and speculations, which, in proportion as they captivate our senses, and raise our admiration, excite in us a reverential awe of futurity, and a grateful sensibility of the goodness and mercy of Him who gave us being.

From the evidence of scripture it is indisputably clear, that in the person of Adam the male and female properties were originally combined ; as indeed we now find them in many species of the lower class of animals ; consequently the expression of *male* and *female*, does not necessarily imply two distinct bodies. In Genesis i. 27, we read, that *God created man in his own image*, i. e. of perfection ; including or containing the prolific or generating powers, which are distinguished by the expression of *male* and *female* ; and *God blessed them*, i. e. these male and female properties, and *said unto them, Increase and multiply, and replenish the earth*, i. e. with beings like Adam ; for this benediction, and this command, were *antecedent* to the formation of Eve, as every one must know who reads the first and second chapters of Genesis.

In this *plural* capacity, therefore, Adam received the blessing of God, when he said unto him, *Be fruitful and multiply, and replenish the earth, and subdue it ; and have dominion over the fish of the sea, and over the fowls of the air, &c.* The six days creation were now completed ; and on the seventh day God rested from all his work ; and having formed Adam, and breathed into his nos-

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trils the breath of life, *he became a living soul.* God also planted the garden of Eden, and put the *man* into it, to till it, and to dress it; and God commanded the *man*, saying, Of every tree of the garden thou mayest freely eat; but of the tree of the knowledge of good and evil, thou shalt not eat of it; for in the day that thou eatest thereof, *thou shalt surely die.* Gen. ii. 27.

Let us here remark, that all these transactions, injunctions, and commands, had passed *before Eve was formed*, or, in other words, before the male and female essences were separated and made the essential parts of two distinct persons. Adam likewise, before this event took place, was appointed God's viceroy over all earthly things, both animate and inanimate; the very elements being made subject to him; for "*he was formed more noble than the angels, and crowned with glory and honour;*" i. e. having the peculiar advantage of *multiplying his own race.* He was, as to his external form, moulded of the celestial æther; and therefore, previous to his fall, his body emanated rays of brightness and splendour, similar to those which our ideas furnish of Moses and Elias when they conversed with God. His reasoning faculty, and *living Soul*, were formed of the *eternal* essence or Tincture of the Divinity; being nothing less than what is termed the *breath of God*, that spark of immortality which generates the *soul*, and is the distinguishing characteristic between man and beast. For, although brute animals inherit the five senses, and possess an instinct to direct them in the choice of food, and to impel the propagation of their species; yet.

yet these are only senses formed from the *out-birth*, or four elements of nature; and not from the *essence* or *tincture* of the Divinity, out of which the soul, the mental intellect, reason, sense, and understanding, are all formed, and transferred to posterity. "*For with the powers God hath endued man, with the same powers shall he multiply his race.*"

From the foregoing passages we are warranted to infer, that the original man was possessed of his spiritual soul, and rational intellect, for the purpose of propagating the same to all future generations. By the force of this rational intellect, or eternal spirit, unclouded by the deformity of sin, he knew and perceived the nature and property of every animated being; and to exercise this intellect, God brought before him every created thing, to see what he would call them; "*and whatsoever Adam called them, that was the name thereof.*" He knew and perceived the nature and quality of all animals; and according to their designation and subjection to the external elements, so he assigned them those characters which they have ever since borne. Adam, however, in his primeval state, was not himself under the influence of celestial or terrestrial elements; but, on the contrary, they were subject to his controul. He was immortal; they corruptible. They sprung out of Time, and were elementated; he sprung from the limbus of Eternity; and into eternity the divine essence or souls propagated from him, must indisputably return.

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TO MEDICAL MIRROR.

But man, thus created in honour and immortality, abideth not. The purpose of his creation was to fill the place of the rebel angels; and hence Lucifer became his mortal foe. This fallen Spirit had entered the gate of Eden, and was preparing to seduce Adam; when the Almighty constituted the test of his obedience; for having endowed him with a *free-will*, an innate power of choosing *good* or *evil*, and of multiplying the same, it was but reasonable to expect from him an implicit obedience, and an angelic race. He that is alone eternal and omnipotent, could not but foresee the subsequent event; and it is his supreme goodness to counteract evil, by preventing its worst consequences. Foreseeing that the prolific tincture, or eternal essence of fecundation, might be contaminated by the malignant spirit of Lucifer, infusing itself into the mind of Adam; who then, instead of multiplying an angelic race, would generate devils; and that were man to fall in this plural capacity, there was no counterpart, no feminine principle, through the medium of which the *serpent's head could be bruised*, or a Saviour become incarnate:---therefore, on a further survey, after the works of creation had been completed, animals named, and man formed and compounded of the male and female tinctures, God said, Gen. ii. 18: *It is not good that the man should be alone; I will make him an help meet for him*; wherefore the rib, i. e. the *feminine* or *conceptive* essence, was taken out of Adam, and concentrated or moulded into a new being, called woman. The emission of this feminine essence or tincture, threw

Adam into a deep sleep; yet when he awoke, he knew that an essential principle had departed from him, and that the woman was *bone of his bone, and flesh of his flesh*, not having been created, *but formed out of himself*, whereby he only retained the animating principle, or active power of generation; whilst the rudiments or seeds of future beings were consigned to the matrix of the woman. Here then individual generation ceased; and Adam, without the *counter-part of himself* had no longer power to increase and multiply. Thus the two tinctures, or divine essences, animating and compounding soul and body, were divided; and by means only of a re-union or contact of those tinctures, could generation then, or now, be performed. It is on this ground that the male and female affections are continually turned towards each other; and that the desire of love and union so strongly pervades every individual of the human race. Hence also the Tempter's reason for beguiling Eve, and hence the seducing power of love, which determined Adam to share in all the horrors of her crime, so pathetically and affectingly described by Milton, in his *Paradise Lost*.

The fatal consequences of the fall, we most sensibly feel, and universally deplore. The earth shook from her foundations. The order of nature was quite inverted. The ætherial and terrestrial elements, which before were fashioned in harmony, and acted in unison, were now discordant, intemperate, and furious. Brute preyed upon brute, and bird invaded bird. The delicious fruits and flowers of Paradise, were exchanged

for thorns and thistles. The serenity of a pellucid and smiling firmament, was convulsed by the thunders of an incensed Deity, by forked lightnings, by contending seasons, by devouring winds, and impetuous storms. Whilst man, ungrateful man, from the privilege of holding these elements in subjection, became subjected to them; and hence subject to all the perils and misfortunes of his fallen nature,

Here, then, began the conflict of the human passions, as violent and ungovernable as the elements themselves. Here the toil and labour of the man, who should *earn his bread by the sweat of his brow*, and the tears and travail of the woman, who should *conceive in pain and sorrow*, had each their source. Here likewise, the dark catalogue of human infirmities, of disease, and death, had its too early date; yet to this æra, which gave birth to our manifold misfortunes; must we look for that benign source of alleviation and cure, which the relenting hand of Providence has graciously afforded to those who will seek for them; for *out of the ground hath the Lord caused medicine to grow; and he that is wise will not despise them; for with such doth he heal men, and taketh away their pains.* Eccl. xxxviii. 4, 7.

Since, by his fall, man became subject to the elements, from them he receives the constitution of his body; but his reasoning intellect, and spiritual soul, are derived from the pure essence or tincture of the Deity, originally infused into the seed of man. To the violence and impurity of the elements, we owe the disorders of the body; to the temptations and allurements
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of Satan, we justly impute the diseases of the soul. Yet by due attention to our reasoning faculty, it is no hard task to preserve health, or prolong life, to the term of its *natural* dissolution; while by the powers of the mind, and the light of the gospel, we may still avoid the poison of sin, and become members of that glorious kingdom, which is the sure reward of the good and virtuous.

The imperfections and diseases of the body, therefore, beginning with Adam, are in consequence transmitted to his posterity; and may be divided into *hereditary*, and *accidental*. Hereditary complaints proceed from a certain defect of the animal powers, or imperfect state of the sanguiferous system, at the time of copulation. The accidental, consist of all such maladies as are communicated by the discordant or putrid state of the elements, not only during the time the child is encompassed in the womb, but from its birth, to the latest hour of its existence. And it might here be observed, that the increase or decrease of both hereditary and accidental diseases, depend almost entirely on the *purity* or *impurity* of the blood. For if pure, in both male and female, at the time of impregnation, the foetus will be naturally strong and healthful. So likewise, if after parturition, and during life, care be taken to keep the blood in an uncontaminated and elastic state, we shall not only avoid the common effects of excessive cold, heat, and moisture; but escape that direful train of acute diseases, communicated by putridity and infection; or, should they by chance attack us,
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the effect beomes slight and temporary. A circumstance this, which surely ought to weigh perpetually on the minds of those, who know how to value the blessing of health, or who would wish to live a long, an active, and a pleasant life. This is therefore a speculation of that high importance, that I shall now shew how hereditary complaints are communicated in the act of copulation---how increased and fostered in the womb---how accidental diseases grow up and follow, and how both these enemies to the health and happiness of mankind may be prevented or overcome.

In that union of the sexes to which we are instinctively impelled; or rather, in the union of those essences or tinctures peculiar to the generative organs of the male and female, in the contact of which the first moments of human existence commence, the most whimsical and absurd theories have been set up. No branch of physiology has been more exposed to censure and mistake. While the phenomena of the heavens, of the earth, and even of the human mind itself, are traced with a steady hand, and with all the dignity of philosophy, the functions of the human body, in health as well as under disease, though expounded with a profusion of fantastical erudition, appear almost in as much doubt and darkness as in the days of Paracelsus.

Let us then proceed to review the mode by which generation is accomplished. I have in my former writings explained the Systems of Buffon and of L^ew^enhoek, in their speculations on the animalculæ found in the seed of man, and in that of brute animals; I
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have also, in the Medical Part of my Family Physician, shewn the mode by which generation is performed, so far as relates to the action itself, and to its general effect. I shall now consider it in a new light, as it concerns the propagation of soul and body, and of family-temper, likeness, and disease; but as the female organ is so materially concerned in the mysterious act of generation, and in all its consequences, I shall here take up the reasoning of a late ingenious author, whose opinion of the action and powers of the female generative parts, exactly coincides with my own.

The extremity of the uterine system, without the nymphæ, seems not, except from its aperture and the lascivious susceptibility of its texture, materially requisite to generation. Immediately within the nymphæ, the *vagina*, or great canal, of the uterus, begins. Before coition has disturbed its proportions, it is generally about five or six inches long; and when thrown into a circular form, without violent distention, its diameter is about a sixth part of its length. But as, in coition, the vagina is the immediate receptacle of the penis, it is capable of great distention, and may be rendered of very considerable capacity. In general, however, after frequent contact, this canal becomes much shorter, but more proportionably increased in its diameter; yet being contrived by its organization for the purpose of exciting titillation and pleasure, it can and does accommodate itself to whatever size is necessary closely to embrace the penis in the act of copulation.

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At the upper extremity of this canal, the uterus or womb is seated. It is of a pyramidal form, with its apex towards the vagina. Its greatest length, in virgins, is not more than two or three inches; and its width is scarcely one; its internal cavity must therefore be very small. It is connected to the vagina or great canal by a passage so small, that a bodkin or stilet cannot be introduced without much difficulty. In the broad or upper extremity of the womb, the ovaria are seated. Their substance is spongy, and they contain an indefinite number of vesicles of a duskyish semitransparent quality, the involucra of which are distinct, and similar to the general substance of the ovaria. These vesicles are the ova or eggs, which contain the rudiments of the fœtus, and which must absolutely be impregnated with the male seed, before it can be possible for generation to take place.

Now it has been, and is, the common opinion, that when venereal embraces take place, the whole genital system of the male being thrown into action by libidinous desire and violent friction, by this exertion the semen is thrown with considerable vehemence from the penis, and is either forced through the mouth of the womb, and attracted by the ovaria; or, that it is received by the Fallopian tubes, and conveyed by them through a variety of convolutions, till by their fimbriæ they are conducted to the ovaria, in the manner I have already fully described in the Medical Part of my Family Physician; all which tedious and complicated process is alledged to take place in the *instant* of coition.

Others

Others again suppose, that the internal orifice of the womb becomes open and pervious during the exertion and enjoyment of copulation, and that the glans of the penis absolutely pass into the cavity of the womb, and eject the seed immediately upon the ovaria. To each of these theories there appear insuperable objections. In refutation of the first, we need only observe, that the vagina, from its structure, and from its organization in the act of venery, is disposed strongly, and in every part, to embrace the penis; and as the glans must thereby be closely surrounded, although it reaches not in every person to the furthest limits of the vagina; the slight and momentary impetus of the semen will thus be very effectually resisted, if not totally subdued. If the penis be not of magnitude sufficient to occupy the vagina to its full extent, the unoccupied space must be somehow distended; and, let this vacuum be what it will, its resistance must be effectual; and, if it be not distended, the power or pressure which occasions its collapse will over-balance the impetus of the semen. But supposing the virile member in all cases to be so exactly proportioned as to occupy the whole length of the uterine canal, which however we know is not the case, yet from what principle shall we ascertain that the femal tube of the penis, and the apex of the womb, shall be made so exactly to correspond as to become continuous? The semen, in the event of coition, is doubtlessly thrown out by the penis with some force, though this force will always depend upon the vigour of the male organs, and therefore must vary from the

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lowest to the highest degree of vigour of which those organs can be susceptible. But even allowing the glans penis and apex of the womb to fall into exact contact upon due penetration, and that the male seed is always ejected with considerable force from the penis, and the vagina to be no barrier to the progress of it, yet how is it to force its way into the cavity of the womb? The aperture which leads from the vagina or great canal into the womb, is in fact no aperture at all. During menstruation, indeed, it is pervious; but even then it is only capable of admitting a very small probe; and this is no argument that it is naturally, and at other times, pervious. How often too has this aperture been entirely blocked up by preternatural obstructions, and conception nevertheless taken place? Instances of this have often occurred; and the precision and authority with which they are recorded by different practitioners, leave no room to evade the argument. Hence this mode of impregnation appears not only highly objectionable, but utterly impossible; having no correspondence with the human structure, or with the economy of Nature.

After what has been said, it may appear idle to prosecute any farther refutation of the progress of the male seed by the Fallopian tubes, or through the mouth of the womb. But as authors of the greatest respectability have believed in its progress through the tubes, and tell us they have even seen it there, it may not be improper to enquire how far this is ascertainable. The Fallopian tubes, through which the semen is said

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to pass, originate, by very minute perforations, through the fundus of the womb; and, encreasing rapidly in their diameters, their capacities, when dilated, may be about the third part of an inch where they approach the ovaria. Here, again, they suddenly contract, leaving only a small opening; while their main substance is still continued, and is expanded into that plaited or jagged fringe called the fimbriæ, which is contiguous to the ovaria*. I shall now ask, by what law in nature, by what effort of it, is the male semen to be conducted through this conical and convoluted canal? Can the semen now possess any active force, to introduce itself through the rigid perforations of this organ, and to overcome the collapse of the tubes? The stimulating power of the semen must soon be lost in a vessel which it has not power to distend; and we cannot suppose it capable of acting in a direction completely opposite to what is the acknowledged office of the tubes. It must be by irritability that the ovum is conveyed into the uterus from the ovaria; and we know no vessels in any part of the body whose action is double and contrary. This system therefore favours of great improbability. But we are told, by some, that they have actually seen the male semen in its unaltered state, lodged in the Fallopian tubes. These sagacious authors might as prudently have affirmed, that they had seen snow upon the canal in Hyde-park at midsummer. They did not

* See the Medical Part of my Family Physician, page 17, 89, 97, &c. where all the parts, both male and female, are anatomically described.

know, or did not choose to recollect, because it made against a pre-conceived opinion, that the human seed, when subjected to heat, especially to such a moist and natural heat as those parts constantly afford, soon loses its spissitude and tenacity, and becomes very subtilly fluid, and almost colourless. Besides, it is universally acknowledged, that a considerable part of the semen is almost always, immediately after coition, rejected by the female. When we attend to the many instances of credulity and imposition in the theories of generation, we need not marvel at the aptitude and facility with which pretended discoveries creep into notice, and the solemnity with which they obtrude themselves into systems.

All the foregoing arguments against the possibility of a pervious communication between the vagina and the uterus, are also conclusive against the suggestion, that the penis in the act of coition penetrates into the cavity of the womb. Nor is the assertion of those who contend that this orifice, by the turgidity of the parts during coition, naturally opens and dilates itself to receive the male seed, marked with the least degree of probability. How is this dilatation of the orifice to be effected? Though the whole uterine system, during the venereal act, be rendered stiff and turgid by animal desire and influent blood, yet it is more probable that this turgidity would rather compress than dilate the orifice; and the structure and texture of the womb seem exceedingly unfavourable to sudden dilatation by any means whatever. In an unimpregnated
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or virgin state, the womb is so small that its sides coalesce or adhere together, and it has no hollow appearance whatever; though, from the texture and elasticity of its fabric, it may be thrown into a globular form, which will constitute a cavity. But in coition, with all its occult and uncommon phenomena, what charm have we left to overcome this coalescence, and form this cavity, by opening or separating the membranous sides of the womb? Will it here be said that the forcible ejection of the male semen will effect this purpose, or that the stiff and turgid state of the penis itself will force its way into a fabric so remote and delicate? Though females may entertain sanguine ideas of these things, we must suppose that the vigilant anatomist, toiling through the unalarming and chilly organs of the dead, ought to furnish a more rational hypothesis, whence to deduce the active principle and admirable process of the human impregnation.

Authors have been always eager to establish the certainty of a considerable afflux of blood to the female organs, and consequent turgidity during the voluptuous communication of the sexes; and this has been a wonderful prop to many absurd conjectures. This afflux, and consequent turgidity, they suppose originates, like the erection of the penis, from the strength of libidinous ideas, and other locally irritating causes; and is intended by nature to induce a tension in the female organs, that the progress of the semen may thereby be facilitated. This tension, again, they suppose induces some kind of constriction, which is

said to support the action of the different parts of the genital system, but particularly of the Fallopian tubes. These tubes, it is said, are remarkably distended, during coition, by the blood rushing into the numerous vessels which creep between their coats, by which means they are erected, and their fimbriated terminations applied to the ovaria; and it is gravely added, that dissections of gravid women, and the comparative anatomy of brutes, corroborate the opinion. Were it not for the serious respect with which this anatomical observation hath for a length of time been favoured, no body surely would be at the pains of detecting the absurdity. Allowing that this turgidity, with all its concomitant circumstances, really happens in the *living* subject, how can it possibly exist in a carcase flaccid with death, and, as is always the case in a human anatomized body, where death must have taken place some considerable time before?

But this turgidity, though it sometimes may happen, and yet in a degree very limited to what is alledged, does not always happen; and, when it really does take place, it seems rather to be the companion and promoter of libidinous gratification, than a principal and essential promoter of conception. To many women the embraces of the male are extremely, if not completely, indifferent; and to some they are absolutely disagreeable; yet even these women are prolific. There is no difficulty in suggesting a very sufficient and natural reason why the parts of the female, directly subjected to the action of the penis, during the venereal congress, should

should become turgid with influent blood, and sometimes be constricted. Nature, though she seems in general unfriendly to excessive lust, yet sometimes permits it; and these are the means she seems to have appointed for heightening it. Besides, it is proper that the animal instinct, which prompts the reproduction of the species, should not be disappointed in its gratification, however brutal these sensations and ideas may appear to the purified philosopher. These means then, however they may contribute to the mutual sensibility of the sexes, in the voluptuous gratification of animal pleasure, appear to have no real influence on the process of generation, after the venereal congress has ceased; nay, we have reason to believe that their action or influence does not extend beyond the limits of the vagina, except in common with the rest of the general system, even during that congress. If an afflux of blood to these parts were always to be attended with these effects, what violence must the ovaria be exposed to by reiterated coition, and by every return of the menstrual discharge! During the menstrual afflux, a very considerable distention must surely take place over the greatest part, if not the whole, of the genital system; and, as this turgidity is the principal reason assigned for the action of the tubes, by what means are the fimbriæ diverted from exercising those functions which turgidity, though from another cause, at another time so successfully instigates? Also how happens it that grateful copulation is not always productive, and the contrary? that the fimbriæ, in every venereal act,

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do not operate upon the ovaria, and thereby produce more fœtuses, or a waste of the ova? and that the organs themselves are not incapacitated, or diminished in their energy, by such repeated exertions? We have every reason then to conclude, that the tension and constriction of the female organs, induced by the afflux of blood during coition, if of consequence, are intended solely to promote animal gratification; and that they have no direct influence on the actual progress of the semen through the above-described communications to the ovaria.

Upon the whole, it is certainly no way equivocal, that the semen cannot, in any manner, be applied to the ovaria by means of the fimbriæ; that it cannot ascend or advance through the convolutions of the Fallopian tubes; that it cannot divaricate and traverse the compressed uterus; and that it cannot even operate a passage through the rigid bulwark of the cervix uteri. The probability of the progress of the *aura seminalis* through the same paths is destroyed by the same arguments; and the whimsical opinions founded on the presence of animalcules in the semen, and on the organic bodies furnished by the semen of both sexes, and uniting in the uterus, as far as this alledged aperture is concerned, must stand or fall by the same fate. It may seem however strange, that a doctrine so ancient, and so universally believed, should be so easily overthrown; and it may furnish, to the speculative reader, unfavourable ideas of the present state of medical literature. He may indeed wonder, that, though every
science

But since the semen, in some shape or other, contains that animating principle which is indispensibly necessary to generation ; and since the ovaria as indisputably produce something from whence a living creature is to be evolved, it becomes demonstrably clear, that the influence of the male seed must be powerfully incorporated with the female, and directed to the ovaria, before this effect can possibly take place. We have already seen how this cannot happen ; let us now endeavour to point out a rational medium by which it may be accomplished. For this purpose we must again return to the vagina, or canal of the uterus, as being the principal organ on the part of the female, which actually contributes to propagation ; and without the full and complete use of which, impregnation cannot take place. It therefore demands a very minute and attentive investigation.

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lymphatics.

lymphatics. It commences, from beneath, at the nymphæ, and rising obliquely about five inches, is lost upon the uterus. Its capacity is very different in different subjects, and in no very distant periods of life in the same subject. A very respectable anatomist finishes his description of it by saying, it is "*membro virili secundum omnes dimensiones accommodabilis.*" Its inner membrane, though very uneven, is delicately smooth, and, from its nervous texture, exquisitely sensible; the outer membrane is more spongy and muscular; and, the whole body of the canal is very plentifully supplied with blood-vessels, nerves, and lymphatics. We know little more of the lymphatics of these parts, than that they are more numerous proportionally than in any other part of the body. Those which originate in the exterior parts of the female genital system, traverse the inguinal glands, while the deep-seated ones take a much more direct course to their place of union with the lacteals: but of these we shall be more particular, when we adduce our observations in favour of a very powerful absorption subsisting in the vagina.

The entrance into the canal of the uterus from without, is guarded by the nymphæ, which form an eminence on each side, so peculiarly constructed and arranged, that we must think lightly of the physiologist who could suppose them to be only appendages in office to the urethra. Indeed, as nature frequently operates more than one end by a particular structure, we shall not pretend to limit the secondary or inferior offices which the nymphæ may promote; but we see much

reason to believe them created to assist powerfully in preventing the speedy escape of the male semen, and thereby exposing it longer to the action of the absorbent system. A multitude of circumstances corroborate this belief; and it will not be impaired by the allegation, that these ridges by no means constitute a regular and complete valve. Immediately within this barrier, a structure, on the same principles as those of the nymphæ, but more elegant and powerful, commences; and it is continued over the surface of the vagina, gradually growing finer, till it is lost in smoothness near the upper extremity of the canal. This structure is the rugæ of the vagina, so accurately drawn and described by Haller and others; but degraded by some anatomists, who mark it only as useful in exciting venereal enjoyment, or admitting expansion during coition and parturition. It is insinuating a mean and disgraceful reflection on the important order and operations of nature to suppose, that these rugæ, which are not casually arranged, but are regulated with as much precision and uniformity as we can trace in any other part of the general system; I say it is nugatory and presumptuous to assert, that this intricate, extensive, and beautiful, arrangement, has been so minutely laboured for no other purpose, but merely to excite a greater titillation during the gross and libidinous commerce of the sexes, and a greater extension during parturition. This structure may indeed promote secondary purposes; but it is intended for much nobler ends. Had these rugæ been constructed merely for simple contraction and dilatation,

they would have covered equally the whole surface of the vagina, which certainly does not happen; neither, if these had been their principal uses, would they be so soon and so easily obliterated. We believe, then, that the rugæ of the vagina are thus contrived principally to protract the semen in that viscus, after the penis is withdrawn, and thereby to favour absorption; especially as the qualities of the semen coincide wonderfully with these intentions.

The semen, as it is secreted from the blood in the testicles, is very different from that heterogeneous mixture which is expelled by the urethra in coition; though, by the alteration, its fecundating quality is not improved. When it is conveyed into the vesicles it is of a thin consistence, of a pale yellowish colour, and little in quantity. In these vesicles it is somewhat inspissated, and its colour heightened; and, after it is mixed with the liquor of the prostrate glands, it becomes still thicker, and of a more whitish colour. This consistence which the semen acquires in its progress from the testicles, may produce other slight properties; but the principal intention of it seems to be, to correspond more effectually with the absorbent power of the vagina: for thus, by the increased tenacity of the semen, the remora of its fecundating part must be protracted in the vagina, while at the same time the absorbents are allowed more time to attach those active subtle parts intended to be carried into the circulating system. We may add here, in order farther to confirm the opinion concerning the use of the tenacity of the semen, that

that when too little of this mucilage is derived from the glands, or when it is of a depraved or thin quality, the whole mixture escapes the machinery of the vagina too rapidly, and hence coition becomes unproductive. This is the feminal serosity, as it is called, held to be one of the few causes of sterility in man. And we may add farther, that when the consent and power of procreation begins to fail on the part of the woman, the crenulations of the vagina are then always visibly decayed, whether affected by the advances of age, or by imprudently-reiterated venery. But what are we to think of a very respectable author, who gravely tells us, that the semen, by stagnation, and by the addition of the cream-like liquor of the prostrate glands, is better suited to the projecting effort of the urethra in the event of coition? Indeed, it is not to be denied; that the increase in quantity of the feminal mixture may enable the projectile power of the urethra, with its aiding muscles, to act with greater efficacy; but a boy would laugh in my face were I to tell him, that by adding to the weight and tenacity of water, his squirt would throw it much farther. To act in concert, then, with these unquestionable qualities of the semen, the surface of the vagina, by means of its rugæ, from their elevation and arrangement, must have a very considerable effect in heightening the remora we have described. No doubt, if nature only had in view the prevention of the regress of the semen, we might have met with a much simpler mechanism; but as to this part very different offices, and all of them material, were allotted, it

it has been intricately qualified for them all. Thus, upon the whole, we see an admirable disposition in the semen, and in the surface of the vagina, to facilitate and promote the action of the absorbent vessels.

Though the absorbent system has not been traced with the same minuteness and success which have followed the investigation of the sanguiferous system, it is however known to be very general, and very powerful, and it is remarkably so in the cavity of the pelvis. How, otherwise, is that effusion which is constantly going on, in order to lubricate the whole genital system in the female, and to prevent the coalescence or concretion of its fides, resumed? In those unfortunate females whose menses have taken place, but in whom likewise the expulsion of which has been prevented by the unruptured hymen, or by unnatural membranes blocking up the passage, much of the blood has always been resorbed; and in those whose disease has existed long, and where the thick parts of the blood have begun to be broken down, the colluvies has been resorbed, and a train of symptoms induced, not to be accounted for by the mere turgidity which this obstruction occasioned. The infection and progress of syphilis, or confirmed lues, not only establish the certainty of a very rapid and powerful absorption in the vagina, but also exhibit the power and influence of the irregularities of its surface. It is surely very evident, that the chief application of the venereal virus, whether in gonorrhœa or syphilis, but especially in gonorrhœa, must be near the farther extremity of the vagina, though

though there can be no doubt but the ulcerated glans may often affect the exterior parts by its introduction; but in a confirmed lues, the fundus of the vagina is rarely the seat of ulcer, and it is never affected in gonorrhœa. Here the surface of the vagina being mostly smooth, the poison runs downwards, till, falling upon the rugæ, it is there intercepted and retarded. Here then the poison is multiplied, and leisurely applied to the mouths of the lymphatics, through which it is carried into the blood; where, assimilating together, it contaminates the whole mass. Though the progress of the syphilitic poison is not always thus regular, the variations do not affect this opinion. When the lymphatics, and their glands, are vigorous and easily permeable; when the application of the venereal virus is within the nymphæ; and when it is sufficiently active, the first symptoms of disease arise from general contamination; and was this poison always very mild, and taken up by the absorbents within the nymphæ, there is no doubt but the whole mass would almost always be diseased, without much chance of ulcer or preceding bubo. But there are many circumstances which tend to retard the speedy absorption of syphilitic virus, even when it is extremely active; and, among these, the inflammation which in general it must induce, is not perhaps the least considerable; but these cannot affect the absorption of the seminal fluid of the male. The syphilitic virus too, may, from the laxity and lubricity of the vagina, (a circumstance very general in immodest women,) not only escape absorption, but may be carried

ried outwards, to exercise its energy on the external parts. And it is from these reasons partly, that immodest women are so little disposed to conception, and that modest women, when subjected to venereal infection, generally experience the more latent and violent species of this disease. And as a greater surface of absorbents is exposed in the female to the contaminating influence of the diseased male organs, and as the greatest part of the female genital system has a much readier intercourse with the blood than through the inguinal glands, we meet with this species of syphilis much oftener in women than in men. The cure of syphilis, too, by specific remedies introduced into the vagina, fully demonstrates the strength and activity of the lymphatics in this canal. Is there then a ready and established communication, for disease and for its remedies, between the vagina and the general circulating system of the blood, while a mild fluid, yet possessed of activity infinitely beyond that of any poison, and created for the highest and best of purposes, is not permitted to traverse the same channels? Many other corroborating circumstances, both in fact and in analogy, might be adduced here, were not these arguments in themselves conclusive.

In a due state of health there is what may be called an intestine motion in the blood, occasioning and promoting its commixture, as well as its separation. In all general diseases, and even in many which are called local, this intestine commotion is heightened, diminished, or deranged; and in the exanthematous or eruptive disorders,

disorders, it must be remarkably so. In syphilis, though this disease is not directly exanthematous, there must be excessive disturbance, and certain depravation prevailing throughout the whole system, before such complete destruction can be brought upon it. In these cases of disease---where vehement infection, with its fatal consequences, is overturning all before it, we have always found, that milder infections could make no impression. Hence the practitioner never hesitates to ingraft the small-pox, though the patient may have already received the disease, either by natural contagion, or by prior inoculation: hence a milder disease is often removed by a severer one; hence slow consumption is always retarded, and often overcome, by fecundation; and hence fecundation itself, as the feeble stimulus, is often prevented by the anticipating disturbance of syphilis, or of similar diseases vehemently pre-occupying the circulating system. It is this anticipation, this prior possession, and change in the circulating blood, which reasonably and emphatically accounts for the want of influence in the human semen upon the female after impregnation has fully taken place, or while the mother is providing milk. And we might account for the production of twins, triplets, and those rare instances of more numerous progeny, from the same circumstances. One, two, or more, ova may indeed be so ripe as to meet completely the fecundating impulse of the male semen at one time; and it is perhaps more strange that the different foetuses should be matured and expelled about the same time, than if a greater

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period intervened between the expulsion of each; and might not a second intercourse of the sexes be successful, when the female circulating mass was not fully pre-occupied by the influence of the first? But the extent and influence of prior infection, or impregnation of the blood, has been better observed in the venereal, than in any other disease, or natural occurrence. Women whose general system is vitiated by the syphilitic virus, are always incapable of conception; or if the vitiation is not complete, but in a slight degree, an imperfect fecundation may take place; but its product fails not to demonstrate the want of energy, and the unqualified state of the mother, from whence it drew its principal arrangement. These ideas are corroborated by the mode of cure adopted in the circumstances we have been describing, and by the general effects of it.

Thus we have endeavoured, and we hope with success, to establish the truth of a strong power of absorption in the genital system of the female, originating in the vagina; and a disposition in the whole mass of blood, to be affected according to the properties of what may be mingled with it. And as, from the present state of anatomical knowledge, we have no right to suspect any other mode than this of absorption, by which the unrejected and finer parts of the semen can in any shape, and with any effect, be determined towards the ovaria, let us see how this can be farther ascertained by what we may suppose to be the effect of the

the absorbed semen, and the future appearances of impregnation.

In human creatures the evolution of all their parts is gradual, and the work of time. From the moment in which the ovarian nucleus receives the vivifying impulse from the semen, till the period of puberty; from the dawn of its existence, to the completion of its figure and its powers; its alterations are so many, and so varied, that our idea of the germ is not recognisable in that of the infant, and our idea of the infant again is lost in that of the perfect animal. A gelatinous particle, without necessary form and texture, becomes a stupendous fabric, so intricate and elaborate, though at the same time perfect and complete, that human ingenuity and reason have toiled almost fruitlessly for thousands of years in investigating the progress. It has indeed been averred by some, that all the different organs of the animal in its complete state are original and distinct in the embryo, and are only unfolded and rendered more evident by its increase. This surely is not the case. The animal is certainly endowed with the power of completing itself; and can, from inorganized parts, produce an organized structure. The parts are only evolved and perfected as they become useful in the different stages; and the evolution of many of them can be prevented without the destruction of life, or excessive prejudice to those already evolved. If the different organs or rather principle, are at first perfect, why are those effects which depend upon them not perfect also? Why is the state of infancy a state of idiot-

ism? why is the temper of youth capricious and flexible? and why are the temper and passions of the adult but barely discernible in the preceding stages?

As we are of opinion then, that the different organs are matured only as they become requisite and necessary; consequently, we believe the evolution of the generative organs in both sexes must be among the last efforts of the increase and completion of the body. This evolution could not have taken place earlier. If it had, the mind must have been affected by these impulses which announce the maturation of these organs, by which we know the mind, body, and soul, are connected. In the male, the foundation and powers of maturation, of that strength, and of those more rational qualities which belong to him, are laid to ripen with puberty: hence communication with the female, before these are finally arranged and secured, proves inefficient, and entails upon him debility both of body and mind. The same thing holds, as far as the same ends are concerned, with respect to the female; and we cannot suppose that nature could be so idly eccentric, as to punish the female with a disposition or propensity to procreate, before the body was capable of undergoing the various disorders and dangers of pregnancy and parturition. For the same reasons, none of the ordinary organs of sense are qualified to receive or communicate distinct impressions, till the brain, the seat of the soul, as the heart is of life, has acquired those properties which must fit it for its arduous offices. It is only when the different organs of sense have been completely

completely evolved, and all their parts sound and just, that the power of the mind is effectuated and established. This faculty, though it seems essentially different from reason, is no doubt the origin of it; for the extension of common sense, from memory, or rather from comparison, and what may be called the balance of the senses, constitutes what is called reason and judgment. While the organs are incomplete, from infancy, or from disease, their communication with the understanding is also incomplete. Those who have been born blind, or whose eyes have been destroyed in infancy, before they were become useful, have none of those ideas which depend upon the eye; it is the same with the deaf, and in all cases of ideas depending upon one sense: and we may add, the early castrated have no comprehension of, or propensity to, the gratifications of love. Do not these things show---and a thousand other circumstances might be adduced to strengthen the proof---that the mind acquires its powers only as the parts of the body are unfolded, and confirmed; that the body is perfected only as the mind is qualified to receive its impressions; and that the parts of the body are perfected by one another?

During infancy and youth, strictly, the ovaria are simple inorganic masses, partaking of no more life than is barely sufficient to sustain them, and connect them with that energy and progress of constitution which are afterwards to unfold all their properties. At the period of puberty, thus denominated from the change which takes place in the genital system at this time of life,

this progress and developement of the ovaria is finished by nature; and these bodies are generated, and completed within them, which will exist without impregnation by the male, but which this impregnation alone can finally mature and evolve. That these bodies are not generated at an earlier date, anatomy as well as reason, founded on the foregoing arguments, assure us; and, that the ova of all the fœtuses, which the female is afterwards to produce, are generated at that time, seems equally certain. Though this change in the ovaria is the most essential, the whole genital system also undergoes a very material change. The simple alterations of structure and dimensions in the different parts of this system, though they are necessary and subservient to generation and parturition, yet they are not so material, either in themselves, or to our purpose, as to require a minute description. This, however, is not the case with respect to the menses. It is chiefly with a view to the nutrition of the fœtus that this extra-sanguification in the female is provided by nature; which is determined to the genital system, in the same manner as the other fluids are determined to other outlets; but as the continued drilling off of this extra blood would be exceedingly inconvenient and disgusting, nature has prepared, as it were, a cistern for its reception. What may be sufficient to bring on the hæmorrhage, however, is only accumulated; and the general redundancy, induced by the obstruction and accumulation, subsides gradually as the hæmorrhage goes on. This is the manner of menstruation in the unimpregnated

unimpregnated female, and these are the reasons why it assumes a periodical form. In the impregnated female again, the preparation of extra blood still continues, but its consumption becomes very different. By the extension of the uterus, and by the waste occasioned by the nourishment of the foetus and its involucra, the surcharge, or extra preparation of blood is nearly balanced, or is taken up as it is prepared; and hence the periodical efforts are almost lost. In the first months of pregnancy, however, the uterine system is not always able to consume the surcharge of blood, and thereby take off the periodical effort; and hence it is that the loss of the foetus happens most generally in the early months, and at the usual period of the menses, unless some accident has supervened. And it is nearly from the same reasons that miscarriage is so often to be apprehended in the latter months of pregnancy, and that the foetus is afterwards expelled from the womb. When the foetus has acquired all that bulk and strength which the capacity and powers of the uterus can confer, and when a change of circulation and mode of life becomes necessary to it, the uterus and foetus become plethoric; a general accumulation succeeds; and the periodical efforts of the menses return. During the middle months of pregnancy the foetus is in a state of rapid growth, and is capable of consuming all the blood which the mother can furnish; but there is neither room nor waste, in the latter months, for the blood which the mother is constantly pouring in; and hence arises that plethora, both in mother and child, which is
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to instigate the effort to parturition, which occasions the effusion after parturition, and which is to supply the extended circulation of the born child.

But besides the utility of menstruation to the foetus, there is a very evident connection between it and impregnation. To speak of it as a proof of the ripened qualifications of the female, is to say nothing; its immediate action is essential to conception. In the human female, it is well known, that coition is almost only successful immediately after this evacuation has subsided. Who will reconcile this---and it is no modern and groundless observation---to the consequence which has been ascribed to turgidity and tension, which we have already adverted to? Almost every woman who has frequently undergone pregnancy, and who has attended judiciously to the phenomena of that situation, calculates from the last cessation of the menses. At this time, or rather very soon after, the plethoric tumult of the general system is completely subsided, and the absorbed semen gets quiet and unanticipated possession of the circulating blood; and at the same time the gradually returning plethora promotes its action, and perhaps its determination to the ovaria. When the menses are interrupted, or profuse and frequent, impregnation seldom takes place; and it admits not of a doubt, that when the determination of this blood is towards the mammae, in the form of milk, coition is unsuccessful; and as soon as its determination to the uterine system is restored, other things being favourable, copulation succeeds. We may add as a known fact, that continuing

ning to give suck after the usual period, will occupy the plethora, and prevent its determination, in the form of blood, to the uterine system. It is an additional reproach to the grossness of human nature, that this practice hath too often been put in execution, in order to obviate conception. Sometimes there is reason to believe, that conception has taken place while the plethoric determination to the breasts continued. I am rather disposed to believe, that in such cases its return to the uterine system was recommenced; for about the same time the milk generally loses its alimentary qualities, and gradually dwindles away.

But we have said enough to describe and substantiate those parts of the female, which puberty has prepared for generation. We shall now consider its operation on the male. It need not be repeated, that the seminal fluid is an exceedingly penetrating and active fluid. Its effects, after it is generated, even upon the male, demonstrate its activity and influence, far beyond the precincts wherein we believe it to be accumulated. After puberty, the secretion of it, during even indifferent health, is continually going on; and those collections of it in its reservoirs, which are not thrown out by venereal exercise, or by other means less decent, are reformed and mingled with the general mass. What is actually reformed about the period of puberty before the system has been habituated to it, or saturated with it, produces very curious and remarkable effects over the whole body. The flesh and skin, from being tender, delicate, and irritable, become coarse and firm;

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the body in general loses its succulency; and a new existence seems to take place. The voice, a proof of the tension and rigidity of the muscular fibre, losing its tenderness and inequalities, becomes ungratefully harsh; and the mind itself, actuated by the progress of the body, and forgetting all its former inclinations and attachments, acquires distinctly new propensities and passions. The changes are not entirely the effect of ordinarily progressive age and strength; neither are they promoted by intercourse with the world; for castration will anticipate them, and premature venery, or even gradual familiarity, and early onanism, will diminish them. Boys who have been subjected to castration never acquire either that strength of body or capacity of mind which dignifies the complete male; and the same cruel and unnatural operation performed on brute animals diminishes their bodily strength, their courage, and liberty, and the fierceness of their temper.

If such are the effects of the seminal fluid when resorbed by the male, how powerful must it be when suddenly mingled, and most probably in greater quantity, with the circulating fluids of the attracting female! Coition, or rather the absorption of the seminal fluid of the male by the female, even when not succeeded by impregnation, induces an alteration very general over the female system. The local influence of which may be inferred from the general change which it is capable of inducing during complete health; from the relief which it effectuates in many species of disease; and from the general vivacity and cheerfulness diffused over

over the whole animal frame. It would be prolix to go over every disease which will warrant these opinions; yet in the eye of common observation, the fallow and inanimate female, by coition, often becomes plump and robust, and beautiful and active; while the widow, or married woman, deprived of commerce with her husband, gradually returns to the imperfections and peculiarities of single life; and that the antient virgin, all her life deprived of this animating effluvia, is generally consumed with infirmity, ill-temper, or disease. It is well known, too, that the want of coition at the time of life when nature seems to require it, induces many disorders in females; and that the use of it removes these, and even other diseases. Chlorosis or the whites almost always attack females immediately after puberty; and, even when the violence of its symptoms have not been discerned till a later period, its origin can always be traced back to that time. When the human system is completely evolved, and all its parts have acquired their full growth, a balance is produced between the circulating and solid systems; though, from the ideas we have suggested concerning the menses, this balance in the female cannot strictly be called complete. It is only complete in her when in perfect health, and in an impregnated state; at other times, the catamenia, as preponderating against the powers of the solid system, in proportion to the degree of their period, disturb the equilibrium, and thereby more or less induce a state inconsistent with perfect health. But when the propelling power of growth has ceased before the solids,

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either from actual disease, or want of uniformity in either period, or accession with respect to the progress of the circulating system, have acquired their proper vigour and tone; and when the catamenia has assumed its destination before it is accompanied by the general as well as local energy which is requisite to expel it, an universal want of balance comes on; the blood loses its stimulating influence on the vitiated solids, and these, in their turn, act feebly on the distempered blood. Accordingly, in the cure of this disease, no matter whether adopted from particular theories or from experience, medicines are directed to restore vigour to the solids; and consistence and stimulus to the circulating mass. Nature proceeds in the same manner; and the beneficial effects of coition in the cure of this disease have been too material to escape observation. It may be alledged, that these effects depend entirely upon local influence; and that even voluptuous gratification, by quieting the turbulence of passion, is of consequence in the cure. We shall not say that these things are unavailing; for it appears that the relief obtained is chiefly owing to the increased intestine motion, and consequent stimulus, communicated to the blood by the absorbed semen, whereby the solids themselves are ultimately restored; and we are the more confirmed in this opinion, because all these fortunate effects attend, whether coition be succeeded by impregnation or not. Hysterics, and other diseases, would furnish us with similar explanations and similar cures.

Let us now advance a little nearer our object. It is beyond a doubt, that, in whatever manner the semen acts upon the female, it does not act suddenly, notwithstanding the general assertions of many authors. However productive coition may be, the fecundated product of the ovaria is not immediately disengaged. We dare not avouch this fact from observations made on the human subject, because such observations never have been attempted, nor ever can with the smallest probability of success; but the dissection of brutes, by the most eminent anatomists, with a direct view to the elucidation of this fact, ascertains it as far as such evidence can be admitted. In the dissection of small animals by De Graaff, he found no discernible alteration in the uterus during the first forty hours after coition, but a gradual change was perceivable in the ovaria; and what he supposed the ripened origin of the future animal, at the end of that time, losing its transparency, became opaque and ruddy. After that time, the fimbriæ were found closely applied to the ovaria; the cavities from whence the ova had been expressed were discernible; and about the third day the ova were discovered in the uterus. In large animals, and in those whose time of uterine gestation was longer, it was found that the progress which we have been describing was proportionably slower. The same experiments have been made by different anatomists, and perhaps with very different views; and though they have not always been managed with the same judgment and dexterity, yet all of them more or less confirm

confirm the idea that there is a very considerable lapse of time intervening between productive copulation and the expulsion of the ovum from the ovaria. But if this is the case with animals which soon arrive at puberty, and which, like human creatures, copulate not perfectly before puberty,---whose lives are short, and progress in equal periods of time more rapid than those in man,---by parity of reason, it must happen, that in women the period between impregnation and the expulsion of the fecundated product of the ovaria must be considerably greater than what has been observed to take place in these animals. If all this is true---how are we to suppose nature to be employed during this interval? We believe it is during this period that the whole female constitution is labouring under the fecundating influence of the femal fluid taken into the blood by the absorbents; while the ovaria are largely participating, and their product ripening, by means of the general stimulating process. And the same process which matures the ovum tends to facilitate its exclusion. The ovaria, as well as their product, are at this time enlarged, and other changes, subject to the examination of our senses, induced. It is no proof against the reality of this general alteration in the circumstances of the circulating system, and consequent revolution in the ovaria, that the whole is accomplished with but little visible disturbance, either local or universal. In other cases of material alteration in the mass of blood, equal quietness and obscurity prevail. In scrophulous or scorbutic taints; in the inoculated small pox, or when

when they are produced by contagion; the poison silently and slowly diffuses itself throughout the whole mass, and a highly morbid state is imperceptibly induced. Thus, an active and insinuating poison intimately mixes itself with all the containing, perhaps, as well as contained, parts, perverts their natures, and is ready to fall upon and destroy the very powers of life, before one symptom of its action or of its influence has been discerned. It is the same in a confirmed lues, and it is even more remarkable in the hydrophobia derived from the bite of a mad dog; and the whole round of contagious diseases have the same unalarming, yet certain, progress and termination.

That the final influence of this elaborate process should be determined particularly, and at all times, to the ovaria, is no way marvellous. To qualify the ovaria for this, they are supplied with a congeries of blood-vessels and nerves, at puberty larger and more numerous than what is allotted to any other part of similar magnitude. Were the ovaria merely a receptacle for the ova, which the venereal orgasm, communicated by the nerves, or by the impulsion of the applied semen, was to lacerate; what use would there be for so intricate and extensive an arrangement of blood-vessels and nerves? But we may farther remark, that every distinct process in the human body, either during health or disease, tends to one particular and distinct purpose. The kidneys do not secrete bile, nor does the liver strain off the useless or hurtful parts of the blood which are destined to pass off by the emulgent; neither

neither do the salivary and bronchial glands promiscuously pour out mucus or saliva; the variolous virus does not produce a morbillous eruption, syphilitic caries, or scrophulous ulcer; why then would the fecundated blood unconcernedly and promiscuously determine its energy to the skin, the lymphatics, or the substance of the bones? We know none of the operations in the human body, destined for the ordinary purposes of life and health, or for the removal of disease, but in a greater or less degree involve the machinery of the whole system. A single mouthful of food, while it is prepared, purified, and applied to its ultimate purposes, is subjected to the action of all the known parts of the body, and without doubt to all those parts the properties of which we are unacquainted with; a draught of cold water spreads its influence almost instantaneously from one extremity to the other; the slightest wound disturbs even the remotest parts, and is followed, not unfrequently, with the most unhappy effects; an almost invisible quantity of poison sets the whole frame in torture, and all the active powers of the body instinctively exert themselves to solicit its expulsion:---Can we distinguish these things, and admire them, and then suppose that the most material operation of the human body---the renovation of itself, is to be accomplished in a corner, and with infinitely less formality and solemnity than a spittle is cast upon the wind? The evident means are sufficiently degraded; we need not exert our ingenuity to degrade them farther.

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It is during this interval, between productive coition and the exclusion of the ovum from the ovaria, that likeness, hereditary diseases, and the like, are communicated and acquired. Instead of that influence which the imagination of the mother is supposed to possess over the form of the child, might we not suspect, that the feminal fluid of the male, co-operating, during this interval, with the influence of the female upon the ovum, instigated a likeness, according to the influence of the male and female tinctures, in the united principles? It is during this period only that the diseases of the male can be communicated to the child; and, if we admit not of this interval and general operation of the feminal fluid, we cannot see how they can be communicated, though those of the mother may be communicated then or at a much later period, considering how the child is nourished while it is in the uterus and at the breast. It may be urged against this early and effectual acquisition of likeness, that the foetus does not acquire even the division of its largest members till long after its exclusion from the ovaria: but then we are confident, that, as the foetus takes all its form and other properties from the active subtilty of these blended tinctures, we cannot see any reason why it should not possess this hereditary faculty, in common with the rest. If likeness depends upon the imagination of the female, how happens it that the children of those whose profligate manners render the father uncertain, and whose affections cease with the instant of libidinous gratification, are as frequently distinguishable by their

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likeness as those children who have been born under none of those misfortunes? If the features are not planted during this period, and if imagination be not idle or useless, how was the six-fingered family, mentioned by Maupertuis, continued? When a female of that family married a man who had only the usual number of fingers, the deformity of her family became uncertain, or ceased; and we must suppose her imagination could not have been inactive or diminished, whether alarmed by the fear of continuing a deformed race, or instigated by the vanity of transmitting so remarkable a peculiarity. Was imagination, in a pregnant woman, so powerful as many have endeavoured to represent it, the mother, profligate at heart, though not actually wicked, would always betray the apostasy of her affections; and even a virtuous woman might divulge that she had looked with as much eagerness at a handsome stranger, as she had looked at the aquiline nose, or other prominent feature, of her husband.

But admitting that the seminal fluid of every male possesses some kind of influence peculiar to that male; and connected with his form, as well as his constitution; in the same, or in some similar manner, it contains, notwithstanding the elaborateness of its preparation, the stamina of diseases, some of which often lie longer dormant than even the features of individuals; that the ova are as peculiarly constructed, by the constitution of the female, as any other parts which depend upon gradual and solitary evolution; and that these, operating upon each other by the intervention of the general
 3 system

system of the female, may, according to the power or prevalence of either, affect the features and figure of the incipient animal, or rather the inorganized mass from which the features and figure of the animal are afterwards to be evolved: admitting all these things, will national or even more extensive similitude corroborate the opinion?

We shall have occasion to remark, that the preservation and continuation of the particular species appears to proceed from that parent, who, in the act of procreation, has discovered most strength and vigour; and this is commonly the father. A young negro woman in Virginia, after having brought forth for the first time a black child, was delivered a second time of twins; one of them, a boy, was black, and the other, who was a girl, was a mulatto. As the boy grew up, he retained his short hair, which was naturally frizzled, and had a resemblance to wool; other marks plainly shewed that he was a true negro, and in every respect like the black father who had begotten him. The girl, on the other hand, was tolerably white; she had blue eyes, long black hair, without any natural curl; in short, she had a great resemblance to the overseer of the plantation, whom the negro husband suspected of cohabiting with his wife. Becoming pregnant a third time, she was delivered of three children, two of them mulattoes, and the other a perfect negro. Shall we ascribe this to the effect of imagination? Such an explanation is rejected by the philosopher as absurd, and contrary to every law of nature. We can account

for the third delivery, therefore, only by admitting the cohabitation of two fathers of different races, and then a superfœtation.

While men continue in the same climate, and even in the same district, an uniform peculiarity of features and figure prevails among them, little affected by all those changes which improve or degrade the mind; but when they migrate, or when they are corrupted by the migration of others, this national distinction in time is lost, though in the latter case it seems to be recoverable, unless the cause of change be continued. The beautiful form and features of the ancient Greeks are at this day discernible in their descendants, though they are debased by intercourse with strangers, and by forms of government ultimately affecting their constitutions; the descendants of the few who by chance or design have been obliged to settle among the ugly tribes in the extremities of the north, have, by their intercourse with these tribes, and by necessarily accommodating themselves to the same modes of life, besides other circumstances, become almost equally ugly; and the Jew himself, though he abhors to mingle with a different nation, and though his mode of life is nearly the same in all climates, yet the settlement of his ancestors in any one particular climate for some centuries will very sensibly impair the characteristic features of his people. As equally in point, and less liable to question, we may mention the following similar observations. A Scotchman, an Englishman, a Frenchman, or a Dutchman, may, even without their peculiarities of dress,

dress, be almost always distinguished in their very pictures; the sturdy and generous Briton, notwithstanding the shortness of the period, and the uninterrupted intercourse, is traced with uncertainty in the effeminate and cruel Virginian; and the negroes in North America, whose families have continued since the first importation of these unhappy creatures, and whose modes of living, exclusive of their slavery, are not materially changed, are much less remarkable for the flat nose, big lips, ugly legs, and long heels, than their ancestors were, or than those who are directly imported from the same original nation. From these observations it seems allowable to infer, that though climate, manners, occupation, or imitation, cannot materially affect the form or features of the existing animal; yet these circumstances, becoming the lot of a series of animals, may, by inducing a change in the general mass both of the male and female, be the remote cause of a change in their product.

After what has been premised, it seems rational to conclude, that the prolific fluid, in coition, is neither carried through the Fallopian tubes, nor protruded through the aperture of the uterus, to the ovaria; but that it is taken up by the absorbent vessels, and conveyed into the sanguiferous system; where indeed every active principle that can possibly affect the human constitution is also conveyed. That, by circulating through the blood, it is, by its natural impulse and the additional stimulus acquired from the mother, forced through the corresponding vessels into the ovaria; where, if it finds
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one or more of the ova in a state fit or ripe for impregnation, conception takes place accordingly ; and either one or more are impregnated, as the maturated state of the ovaria might happen to be. But if none of the ova or eggs are in a state sufficiently mature, or chance to be injured by any offending humours, by debility, or disease, in either of these cases impregnation is frustrated, just the same as happens to an addled egg, or to a damaged grain of corn thrown into the earth.

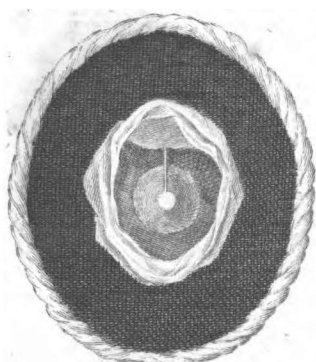
On the other hand, if the male organ be deficient in vigour, or the semen be defective in quantity, consistency, or active power, it then fails of stimulating the female fluid, and is incapable of influencing impregnation. In order therefore that the act of copulation should be productive, the male must unquestionably convey to the female an elaborate tincture, which possesses the essences of his whole system, as well mental as corporeal. In this act, the utmost energy and powers of the mind, of the body, and of the soul, are intimately connected ; and all contribute their particular influence to the seed ; of which every father must be sensible, when he recollects the action of the heart, the seat of life---of the brain, the seat of the soul---and of the whole powers of the body, concentrated and impelled, as it were, through the genital system. That this liquor comprehends the active principles of body and soul, will not I think be doubted by those who give the foregoing arguments their proper weight ; and that it conveys with it, more or less, the direct image of the parent, I take to be confirmed by the evidence of the scripture ;

scripture; where we are told that one absolute and unequivocal form was given to man, in the express image of the Deity. So that man, thus organized and commissioned, was doubtless to convey to future generations, that divine image or signature which God had graciously stamped upon him. For this purpose the seed of man, or efficient principle of generation, must be mingled with the vegetative fluid of the female; and, being attracted or taken up by the absorbent vessels from the uterine canal, passes immediately into the circulating system, where assimilating with the peculiar temperature of the mother, and acquiring new energy from the enlivening quality of the blood, it is directed through its natural channels to the ovaria, impregnating the germ by its active quality, and conveying to it the peculiarities it had derived from the constitutions, forms, tempers, and dispositions, of the parents, with the seeds of whatever diseases, impurities, or taints, were lurking in their blood. For from the blood and brain is the male seed primarily elaborated, and into the female mass is this thrown and assimilated, before impregnation can possibly take place. In the course of six days, I conclude the united tinctures to have travelled through the whole circulating system---to have participated of the hereditary forms and peculiarities of the mother; and to have propelled the ovum or egg from its seat in the ovaria to a suspended situation in the womb, hanging by a minute thread, that afterwards becomes the umbilical vessel, or aperture through which nourishment and life is conveyed from the mother to the

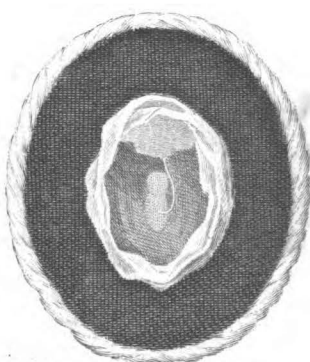
the child. This first visible state of conception, which resembles the lucid appearance of a drop of water, tending to coagulation, is correctly shewn in the first figure of the annexed plate, precisely in the state it was extracted from the uterus of a female, who died on the sixth day after contact with the male, and is now to be seen, preserved in spirits, in Rackstrow's valuable Museum, in Fleet-street, London.

At the time the ovum, or rudiments of the embryo, descends into the womb, it is indeed very minute; but at the end of about thirty days, we may partly discover the first lineaments of the fœtus, though small and imperfect, being then only about the size of a house fly. Two little vesicles appear in an almost transparent jelly; the largest of which is intended to become the head of the fœtus, and the other smaller one is destined for the trunk; but neither the limbs nor extremities are yet to be seen; the umbilical cord appears only as a minute thread, and the placenta, which only resembles a cloud above, has no ramifications, or appearances of blood-vessels. This state of the embryo is expressed in the second figure of the annexed plate.

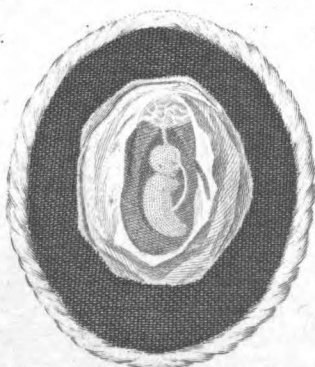
Towards the end of the second month, the fœtus is upward of an inch in length, and the features of the face begin to be evolved. The nose appears like a small prominent line; and we are able to discover another line under it, which is destined for the separation of the lips. Two black points appear in the place of eyes, and two minute holes mark the formation of the ears. At the sides of the trunk, both above and below,



Conception.



First Month.



Second Month.



Third Month.



Fourth Month.

Formation of the Human Fetus.

Dodd del.

J. Pyle sculp.

Plate I.

Published as the Act directs, June 20th 1794.

low, we see four minute protuberances, which are the rudiments of the arms and legs. The veins of the placenta are also now partly visible; as may be seen in No. 3. of the annexed plate.

In the third month the human form may be decidedly ascertained; all the parts of the face can be distinguished; the shape of the body is clearly marked out; the haunches and the abdomen are elevated, and the hands and feet are plainly to be distinguished. The upper extremities are observed to encrease faster than the lower ones; and the separation of the fingers may be perceived before that of the toes. The veins of the placenta are now distended, and are seen to communicate with the umbilical tube. This state of gestation is faithfully delineated in No. 4. of the annexed engraving.

In the fourth month the foetus seems to be completed in all its parts, and is about four inches in magnitude. The fingers and toes, which at first coalesced, are now separated from each other, and the intestines appear, in all their windings and convolutions, like little threads. The veins of the placenta begin to be filled with blood, and the umbilical cord is considerably enlarged; as may be seen in the fifth figure of the subjoined plate.

In the fifth month, the bodily conformation being perfected, and a complete circulation of the blood induced, the mother quickens. The foetus now assumes a more upright figure, which corresponds with the shape of the uterus. Its head is found more elevated, its lower extremities are more distended, its knees are

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drawn upwards, with its arms resting upon them. It now measures from seven to eight inches in length, and is described in the first figure of the second subjoined plate.

Towards the end of the sixth month, the foetus begins to vary its position in the womb, and will frequently be found to incline either to the right or to the left side of the mother. It will by this time be increased to nine or ten inches; and its usual posture after quickening may be seen in the second figure of the second annexed plate.

In the seventh month the child acquires strength and solidity, as may be demonstrated by those painful throws and twitchings which its mother feels from time to time; and it is now increased to eleven or twelve inches.

In the eighth month it generally measures from fourteen to sixteen inches; and in the ninth month, or towards the end of its full time, it is increased from eighteen to twenty-two inches, or more; when the head, by becoming specifically heavier than the other parts, is gradually impelled downwards, and, falling into the birth, brings on what is termed the pains of parturition, or natural labour. For the exact position of the child in the womb, during these last three months, as well as the former, see the corresponding figures in the two annexed engravings, the whole of which were correctly drawn from real foetuses, extracted from the wombs of different women, and are now preserved for the inspection of the curious, in Rackstrow's Museum,



Fifth Month



Sixth Month



Seventh Month



Eighth Month



Ninth Month

Formation of the Human Fetus. Plate II

Dodd del.

J. Paj's sculp.

Published as the Act directs June 20.th 1794.

Museum, to which I beg leave to refer the inquisitive reader.

The nourishment of the foetus during all this time, is derived from the placenta, which is originally formed out of that part of the ovum which is next the fundus uteri. The remaining part of the ovum is covered by a membrane called *spongy chorion*; within which is another called *true chorion*, which includes a third, termed *amnios*. This contains a liquor, or watery fluid, in which the foetus floats till the time of its birth. Before the child acquires a distinct and regular form, it is called *embryo*; but, from the time all its parts become visible, it takes and retains the name of *fetus* till its birth. During the progress of impregnation, the uterus suffers considerable changes; but, though it enlarges as the ovum increases, yet, in regard to its contents, it is never full; for, in early gestation, these are confined to the fundus only; and, though the capacity of the womb increases, yet it is not mechanically stretched, for the thickness of its sides do not diminish; there is a proportional increase of the quantity of fluids, and therefore pretty much the same thickness remains as before impregnation. The gravid uterus or pregnant womb is of different sizes in different women, and must vary according to the bulk of the foetus and involucra. The situation will also vary according to the increase of its contents, and the position of the body. For the first two or three months, the cavity of the fundus is triangular, as before impregnation; but, as the uterus stretches, it gradually acquires

a more rounded form. In general, the uterus never rises directly upwards, but inclines a little obliquely, most commonly to the right side: its position is never, however, so oblique as to prove the sole cause, either of preventing or retarding delivery; its increase of bulk does not seem to arise merely from distention, but to depend on the same cause and increase as the extension of the skin in a growing child. This is proved from some late instances of extra-uterine fœtuses, where the uterus, though there were no contents, was nearly of the same size, from the additional quantity of nourishment transmitted, as if the ovum had been contained within its cavity. The internal surface, which is generally pretty smooth, except where the placenta adheres, is lined with a tender efflorescence of the uterus, which, after delivery, appears as if torn, and is thrown off with the cleanings. This is the *membrana decidua* of Dr. Hunter; which he describes as a lamella from the inner surface of the uterus; though Signior Scarpa, with more probability, considers it as being composed of an inspissated coagulable lymph.

Though the uterus, from the moment of conception, is gradually distended, by which considerable changes are occasioned, it is very difficult to judge of pregnancy from appearances in the early months. For the first three months the os tincæ feels smooth and even, and its orifice as small as in the virgin state. When any difference can be perceived, about the fourth or fifth month, from the descent of the fundus through the pelvis, the tubercle or projecting part of the os tincæ

tinæ will seem larger, and more expanded ; but, after this period, it shortens, particularly at its fore-parts and sides, and its orifice or labia begin to separate, so as to have its conical appearance destroyed. The cervix, which in the early months is nearly shut, now begins to stretch and to be distended to the os tinæ ; but, during the whole term of utero-gestation, the mouth of the uterus is strongly cemented with a ropy mucus, which lines it and the cervix, and begins to be discharged on the approach of labour. In the last week, when the cervix uteri is completely distended, the uterine orifice begins to form an elliptical tube, instead of a fissure, or to assume the appearance of a ring on a large globe ; and often at this time, especially in pendulous bellies, disappears entirely, so as to be out of the reach of the finger in touching. Hence the os uteri is not in the direction of the axis of the womb, as has generally been supposed.

About the fourth or between the fourth and fifth month, the fundus uteri begins to rise above the pubes or brim of the pelvis, and its cervix to be distended nearly one third. In the fifth month the belly swells like a ball, with the skin tense, the fundus about half way between the pubes and navel, and the neck one half distended. After the sixth month the greatest part of the cervix uteri dilates, so as to make almost one cavity with the fundus. In the seventh month the fundus advances as far as the umbilicus. In the eighth it reaches mid-way between the navel and scrobiculus cordis ; and in the ninth to the scrobiculus itself, the neck

neck then being entirely distended, which, with the os tinæ, become the weakest part of the uterus. Thus at full time the uterus occupies all the umbilical and hypogastric regions; its shape is almost pyriform, that is, more rounded above than below, and having a stricture on that part which is surrounded by the brim of the pelvis. The appendages of the uterus suffer very little change during pregnancy, except the ligamenta lata, which diminish in breadth as the uterus enlarges, and at full time are almost entirely obliterated.

The various diseases incident to the uterine system, and other morbid affections of the abdominal viscera, in weak and sickly females, will frequently excite the symptoms, and assume the appearance, of real pregnancy. Complaints arising from a simple obstruction are sometimes mistaken for those of breeding; when a tumour about the region of the uterus is also formed, and gradually becomes more and more bulky, the symptoms it occasions are so strongly marked, and the resemblance to pregnancy so very striking, that the ignorant patient is often deceived, and even the experienced physician imposed on.

Schirrhous, polypous, or sarcomatous, tumors, in or about the uterus or pelvis; dropsy or ventosity of the uterus or tubes; steatoma or dropsy of the ovaria, and ventral conception, are the common causes of such fallacious appearances. In many of these cases the menses disappear; nausea, retchings, and other symptoms of breeding, ensue; flatus in the bowels will be mistaken for the motion of the child; and in the advanced

vanced stages of the disease, from the pressure of the swelling on the adjacent parts. Tumefaction and hardness of the breasts supervene, and sometimes a viscid or serous fluid distils from the nipple; circumstances that strongly confirm the woman in her opinion, till time, or the dreadful consequences that often ensue, at last convince her of her fatal mistake.

Other kinds of spurious gravidity, less hazardous in their nature than any of the preceding, are commonly known by the names of *false conception* and *moles*: the former of these is nothing more than the dissolution of the foetus in the early months; the placenta is afterwards retained in the womb, and from the addition of coagula, or in consequence of disease, is excluded in an indurated or enlarged state; when it remains longer, and comes off in the form of a fleshy or schirrhous-like mass, without having any cavity in the centre, it is distinguished by the name of *mole*. Mere coagula of blood, retained in the uterus after delivery, or after immoderate floodings at any period of life, and squeezed, by the pressure of the uterus, into a fibrous or compact form, constitute another species of mole, that more frequently occurs than any of the former. These, though they may assume the appearances of gravidity, are generally, however, expelled spontaneously, and are seldom followed with dangerous consequences. But, when two or more of the ova descend into the uterus, attach themselves so near one another as to adhere in whole or in part, so as to form only one body, with membranes and water in common, this body will
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form a confused irregular mass, which is called a *monster*; and thus a monster may be either defective in its organic parts, or be supplied with a supernumerary set of parts derived from another ovum. This proceeds from a defect or accident in nature, which it is entirely beyond the power of medicine to rectify or prevent.

It would seem, however, from a due contemplation of the foregoing facts, from the frame and structure of females, and from the ultimate end and purpose of their conformation, that almost every malady resulting from a state of pregnancy, except the last-mentioned, may be in a great measure prevented or removed. The natural temperature of women differs in a very considerable degree from that of men, inasmuch as their blood and juices are determined to a peculiar and distinct purpose; and hence it is that obstructions of the menses, their excess, or privation of the office intended them, constitute those peculiar maladies which we term *Diseases of Women*. The natural temperature of the male, is *hot and dry*; that of the female, *cold and moist*. The action of the procreative tincture of man, is SOLAR, i. e. of a heating and quickening faculty; that of the woman is LUNAR, i. e. of a cool and vegetative quality. As the sun heats, and gives prolific energy to the fruits of the earth, so man fecundates and gives life to the prolific tincture of the woman. Thus the female, as the microcosm, or epitome of the celestial system, possesses an inherent similitude with the moon, vegetates and brings forth the fruit of her womb, and not only feels the influence and sympathy of that
luminary

luminary in her monthly discharges, but in all the travail and vicissitudes of pregnancy. To the same source likewise we trace the cause, and decide the question, Whether the fruit of the womb be male or female? for, if the male seed be predominant, heat will abound, and a male foetus will be generated; but, if the cooling moisture of the woman overcomes the masculine heat in the male seed, a female is then produced. The old and exploded notion, of this cause depending on the child's falling to the right or left side of the mother, is too absurd to weigh a moment on the mind of any reasonable enquirer.

We discover likewise that the male, being constituted of the Solar temperature, is naturally subjected to those infirmities of body and mind, which result from the elements of fire and air; while those of the female are of Lunar tendency, arising from the elements of water and earth. Of these four elements our gross or material part is formed, and by their due and proper commixture in the constitution, or circulating mass, are life and health established; whilst, on the contrary, by their discordant, defective, or predominant, power, disease and death are produced. Now the male abounding in heat, and the female in moisture, is the reason why many disorders incident to man, are alleviated by contact with the woman; as those of the woman are by contact with the man. In the grand scale of nature, we find the meridian heat and scorching rays of the Sun, are qualified and corrected by the cooling moisture and mild influence of the midnight

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Moon; but when either of these are obstructed in their effect, by the intervention of accidental causes, by storms, by tempests, or unseasonable blasts, we then endeavour to repress by art the evil consequences that are likely to ensue. Just so in the human economy, the grand purpose and design of medicine is to correct and modify the discordant elements in the constitution, and give that vigour and tone to the vital powers, which constitute the genuine principles of health and life.

From what has been suggested we might safely infer, that the constitution and temperature of the female requires a medicine of an opposite action and tendency to that adapted to the male, and which ought to be compounded of elements congenial to the intentions of nature, calculated to purge the uterus, to purify the seminal fluid, and give stimulus to the catamenia; which, if not put in motion by the functions of nature, becomes dull and stagnant, and vitiates the whole circulating mass; whence those disorders, peculiarly incident to the most amiable, as being the most virtuous of women, are confessedly derived; and for the cure and prevention of which, a peculiar and distinct remedy has long been wanting.

These, and other considerations, influenced by the known power of second causes, and their faculty of acting upon the mechanism of the human frame, induced me to attempt the chemical preparation of two subtile Tinctures, constituted of a co-mixture of the purest elements of which our blood is composed, and
adapted

adapted to the peculiar temperature and constitutions of the opposite sexes. That intended for the use of Man, I call the SOLAR TINCTURE, as being congenial to the feminal functions and vital principles of his constitution. That adapted to Woman, I call the LUNAR TINCTURE, as being calculated to act upon the menstrual and vegetative fluids, and as being compounded of those elements which make up the frame and temperature of her body. The invention of these Tinctures hath been the result of a long and laborious application to the study of unveiled nature---of the properties of fire, air, earth, and water, in the propagation of animal and vegetable life, and in the composition of medicine; in which, though these elements form the PABULUM of the universe, yet the art of collecting, uniting, and assimilating, them with the vital fluids, seems to be unknown among modern chymists, and hath escaped the observation of medical science. The fixidity of these Tinctures at once establish their power and efficacy beyond all others; for they can never be affected by change of weather or climate, nor by heat or cold; nor will they suffer any diminution of strength or virtue by remaining open, or uncorked; a circumstance which cannot be affirmed of any other fluid at present known, throughout the world.

I shall now proceed to shew the action of the Lunar Tincture on female constitutions; and as this medicine is only intended to remedy such complaints as particularly relate to pregnancy, and the menstrual discharge, I shall omit to notice any other maladies, until

I come to treat of the Solar Tincture ; which, though essentially directed to give tone and vigour to the constitution of the male, is nevertheless equally efficacious to the female in removing all disorders of the blood and lymph, that are alike common to valetudinarians of both sexes. No complaint in the female habit, therefore, comes under our present enquiry, till at or near the age of puberty. Until this important period of the sex arrives, the rules heretofore laid down in the Medical Part of my Family Physician, for the management and future health of young ladies, deserve a very close and serious attention. The evident distinction between the male and female in their structure and design---in their bodily strength and vigour, and in the procreative fluids, demands the utmost attention from themselves, and the tenderest care from the physician. Nor can we too often nor too earnestly caution parents and guardians against the evils of that absurd though fashionable stile of bringing up young ladies, by confining them almost entirely to their apartments, keeping them on poor low diet, and using artificial means to make them spare and delicate, which contribute more to their prejudice than all the incidental diseases to which they are otherwise subject. These refinements in a female education, besides destroying their ruddy complexion, (which is often the design of it,) relaxes their solids, impoverishes their blood, weakens their minds, and disorders all the functions of their body, whereby they are often rendered incapable of conception, and denied the felicity of becoming mothers.

thers. On the contrary, it ought to be the study, as it certainly is the duty, of all that have girls under their care, to indulge them in every innocent diversion, and in every active exercise, that can give freedom to the limbs, or agility to the body; all of which have a natural tendency to exhilarate their spirits, to promote digestion, to stimulate their blood and juices, and, at the proper age, to bring on a free and easy discharge of the menstrual flux.

Though it be universally admitted, that this flux is absolutely necessary to nourish and support the foetus, and that without it human generation cannot be carried on; and that it is consequently and obviously peculiar to the female uterine system; yet it is curious to observe the various absurd and contradictory opinions some physicians have laboured to establish, merely, one would suppose, to bewilder the understanding, and subject delicate females still more to that erroneous or misguided treatment, by which their health, their life, and every earthly blessing, is too frequently involved.

Dr. Bohn, and Dr. Freind, insist that this flux is nothing more than a plenitude of the common mass of blood, which nature throws off only for relief against the too abundant quantity. Dr. Freind supposes, that this plenitude arises from a coacervation in the blood-vessels of a superfluity of aliment, which, he thinks, remains over and above what is expended by the ordinary ways; and that women have this plethora, and not men, because their bodies are more humid, and their vessels, especially the extremities of them, more tender,

tender, and their manner of living generally more inactive than that of men; and that these things, concurring, are the occasion that women do not perspire sufficiently to carry off the superfluous alimentary parts, till they be accumulated in such quantities as to distend the vessels, and force their way through the capillary arteries of the uterus. It is supposed to happen to women more than to the females of other species, which have the same parts, because of the erect posture of the former, and the vagina and other canals being perpendicular to the horizon; so that the pressure of the blood is directed towards their orifices; whereas, in brutes, they are parallel to the horizon, and the pressure wholly is on the sides of those vessels. The discharge, he thinks, happens in this part rather than in any other, as being favoured more by the structure of the vessels; the arteries being very numerous, and the veins sinous and winding, and therefore more apt to retard the impetus of the blood; and consequently, in a plethoric case, to occasion the rupture of the extremities of the vessels, which may last, till, by a sufficient discharge, the vessels are eased of their overload. To this he adds the consideration of the soft pulpy texture of the uterus, and the vast number of veins and arteries with which it is filled. Hence a healthy maid, being arrived at her growth, begins to prepare more nutriment than is required for the support of the body; which, as there is not to be any farther accretion, must of necessity fill the vessels, and especially those of the uterus and breasts, they being the least compressed.

These

These will be dilated more than the others; whence, the lateral vascules evacuating their humour into the cavity of the uterus, it will be filled and extended. Hence a pain, heat, and heaviness, will be felt about the loins, pubes, &c. the vessels of the uterus, at the same time, will be so dilated as to emit blood in the cavity of the uterus, and its mouth will be lubricated and loosened, and blood issue out. As the quantity of blood is diminished, the vessels will be less pressed, and will contract themselves closer, so as again to retain the blood, and let pass the grosser part of the serum; till at length only the usual serum passes. Again, there are more humours prepared, which are more easily lodged in vessels once dilated; and hence the menses go and return at various periods in various persons.

This hypothesis is judiciously opposed by Dr. Drake, who maintains, that there is no such plenitude, or at least that it is not necessary to menstruation; arguing, that, if the menses were owing to a plethora so accumulated, the symptoms would arise gradually, and the heaviness, stiffness, and inactivity, necessary symptoms of a plethora, would be felt long before the periods were completed, and women would begin to be heavy and indisposed soon after evacuation, and the symptoms would increase daily; which is contrary to all experience, many women, who have them regularly and easily, having no warning, nor any other rule to prevent an indecent surprise, than the measure of time; in which, some that have slipped, have been put to confusion and shifts no ways consistent with the notice a

plethoric body would give. He adds, that even in those who are difficultly purged this way, the symptoms, though very vexatious and tedious, do not make such regular approaches as a gradual accumulation necessarily requires. If we consider what violent symptoms come on in an hour, we shall be extremely puzzled to find the mighty accession of matter, which should, in an hour or a day's time, make such great alterations. According to the hypothesis, the last hour contributed no more than the first; and of consequence, the alteration should not be greater in the one than in the other, setting aside the bare eruption.

There are others who give into the doctrine of fermentation, and maintain the evacuation in those parts to be an effect of an effervescence or ebullition of the blood. This opinion has been maintained by Dr. Charleton, Bale, De Graaf, and Drake; the two first of whom suppose a ferment peculiar to the women, which produces this flux, and affects that part only, or at least principally. De Graaf, less particular in his notion, only supposes an effervescence of the blood, raised by some ferment, without assigning how it acts, or what it is. The sudden turgescence of the blood occasioned them all to think, that it arose from something till then extraneous to the blood, and led them to the parts principally affected to seek for an imaginary ferment, which no anatomical inquiry could ever shew, or find any receptacle for, nor any reasoning necessarily infer. Again, that heat, which frequently accompanies this turgescence, led them to think the case
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more than a plethora, and that there was some extraordinary intestine motion at that time.

Dr. Drake contends, that it is not only necessary there should be a ferment, but a receptacle also for this ferment; concluding, from the suddenness and violence of the symptoms, that a great quantity must be conveyed into the blood in a short time, and consequently that it must have been ready gathered in some receptacle, where, while it was lodged, its action was restrained. He pretends to ascertain the place both of the one and the other, making the gall-bladder to be the receptacle, and the bile the ferment. The liquor he thinks well adapted to raise a fermentation in the blood, when discharged into it in quantity; and, as it is contained in a receptacle that does not admit of a continual issue, it may be there reserved, till in a certain period of time the bladder becoming turgid and full, through the compression of the incumbent viscera, it emits the gall; which, by the way of the lacteals, insinuating itself into the blood, may raise that effervescence which occasions the aperture of the uterine arteries. To confirm this, he alledges, that persons of a bilious constitution have the menses either more plentifully, or more frequently, than others; and that distempers manifestly bilious are attended with symptoms resembling those of women labouring under difficult menstruation. But, if this argument be admitted, men would have the menses as well as women. To this however he answers, that men do not abound in bile so much as women, the pores of the former being more open, and

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carrying off more of the serous part of the blood, which is the vehicle of all other humours, and consequently a greater part of each is discharged through them than in women, wherein the superfluity must either continue to circulate with the blood, or be gathered into proper receptacles, which is the case in the bile. The same reason he gives why menstruation should not be in brutes: the pores of these being manifestly more open than those of women, as appears from the quantity of hair which they bear, for the vegetation whereof a large cavity, and a wider aperture of the glands, is necessary, than where no such thing is produced: yet there is some difference between the males and females even among these, some of the latter having their menses, such as the orang outang, &c.* though not so often, nor in the same form and quantity, as women. But without dwelling on these abstract reasonings, the absurdity of which will be obvious to every person who turns to the foregoing system of human impregnation, we need only remark, that there are two critical periods in every woman's life that completely destroy their hypothesis. These are, that at the age of fourteen or fifteen, the menses begin to flow; but subside at the age of forty or fifty. At their commencement, we often find the difficulty, and consequent disease, arises from their *deficiency*; whereas, according

* See this curious subject, concerning the orang outang, and other animals resembling the human species, treated at large, both historically and philosophically, in the second volume of my New Magazine of Natural History.

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to the foregoing doctrine, they would then *always* flow with the greatest freedom. At the period when they should cease, they are apt to come in such abundance as to bring on a flooding, which not only endangers, but too frequently destroys, life---a fatal consequence that could not possibly happen, were the above arguments true.

OF FEMININE OR LUNAR DISEASES.

That the vegetative or procreative faculties of women are universally governed by the lunations of the moon, their own experience, as well as the demonstrations given in my Treatise on the Occult Sciences, indisputably prove. The first show of the catamenia, if it be natural, invariably comes with the new or full moon; or sometimes, though very seldom, at the commencement of her first or last quarters; and this effort of nature is justly considered as the sure sign of a procreating ability, and of complete puberty. Whenever this season arrives, whether early or late, the constitution of every female undergoes a considerable change, and the greatest care and attention are then necessary, since the future health and happiness of every woman depend, in a great measure, upon her conduct at this period. It is the duty of mothers, and of those who are intrusted with the education of girls, to instruct them early in the conduct and management of themselves at this critical moment. False modesty, inattention, and ignorance of what is beneficial or hurtful at this time, are the sources of many diseases and mis-

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fortunes,

fortunes, which a very little attention might now prevent. Nor is care less necessary in the subsequent returns of this discharge. Taking improper food, violent agitations of the mind, or catching cold, is often sufficient to ruin the health, or to render the female for ever after incapable of procreation.

In order to escape the chlorosis, and other similar diseases, incident to young women at that period when the menses commence, let them avoid indolence and inactivity, and accustom themselves to exercise in the open air as much as possible. The discharge in the beginning is seldom so instantaneous as to surprise them unawares. The eruption is generally preceded by symptoms that indicate its approach; such as a sense of heat, weight, and dull pain in the loins; distension and hardness of the breasts, head-ach, loss of appetite, lassitude, paleness of the countenance, and sometimes a slight degree of fever. When these symptoms occur, every thing should be carefully avoided which may obstruct the discharge, and all gentle means used to promote it; as sitting frequently over steams of warm water, drinking warm diluting liquors, &c. When the menses have begun to flow, great care should be taken to avoid every thing that tends to obstruct them; such as salt-fish, and all kinds of food that are hard of digestion, and cold acid liquors. Damps are likewise hurtful at this period; as also anger, fear, grief, and other affections of the mind. From whatever cause this flux is obstructed, except in the state of pregnancy, proper means should be instantly used to restore

restore it ; and if exercise in a dry, open, and rather cool, air, wholesome diet, generous liquors in a weak and languid state of the body, chearful company, and amusement, fail, recourse must be had to medicine. In all such cases blood-letting must be carefully avoided ; but let the patient take from twenty to thirty drops of the Lunar Tincture, in a wine-glass of warm water or mugwort tea, every morning before breakfast, every day at noon, and every night before going to bed, until the intention be answered, which will usually take place in three or four days, without the assistance of any other medicine whatever. But it sometimes happens, in relaxed constitutions, that the menstrual discharge, on its first appearance, is vitiated, and over abundant ; the consequence of which is, that the patient becomes weak, the colour pale, the appetite impaired, and the digestion languid, so that dropsy, or consumption, is likely to ensue. Effectually to prevent these, let the patient be kept two or three days in bed, with her head low, and observe a slender diet, principally of white meats, and her drink red-port negus. Every night and morning for ten or twelve days, let her take one table-spoonful of the Solar Tincture, diluted in double the quantity of decoction of nettle-roots, or of the greater comfrey ; and after the flux has abated, and her health and strength seem to return, let her only take a table-spoonful of the Solar Tincture every day at noon, in a glass of cold spring-water ; which wonderfully contributes to restore a due consistency to the circulating mass, promotes digestion, and invigorates the

the spirits. Before the customary period returns, she must discontinue the Solar Tincture; and, if there be the least appearance of irregularity or obstruction, let her again take, night and morning, for two or three days, from twenty to thirty drops of the LUNAR TINCTURE in a glass of mugwort tea, and she will quickly find a regular habit, and her health amazingly established. In obstinate or neglected cases, where the menses have seceded, and, after an irregular appearance, have turned wholly into the habit, both these Tinctures should be used with a less sparing hand, particularly under circumstances in any respect similar to the following remarkable

C A S E.

Being called to the assistance of a young lady of fifteen years of age, I was informed her menses had made an irregular appearance about five or six times, coming first with the full and then with the new moon, and afterwards at the distance of two or three months apart until they totally disappeared, and turned back upon the habit. No notice was taken, until the patient was seized with a violent bleeding at the nose, attended with fever and epileptic fits. After being under the care of an eminent physician for several months, who directed venesection, and almost every customary application, to no kind of purpose, the disorder fixed in her neck, forming a large tumour, the acrimony of which fell upon her lungs, and threw her into strong convulsions. In this extremity I was sent for. Perceiving the whole system deranged by spasmodic affec-

tions, and a locked jaw almost finally completed, my first object was to relieve the vital organs, by giving force and elasticity to the circulating mass. With this view I with difficulty forced the mouth sufficiently open to administer one table-spoonful of the Solar Tincture *undiluted*; and within half an hour, to the astonishment of her friends, I had the pleasure of seeing every convulsive symptom die away, and of hearing the patient's voice, of which she had been totally deprived for upwards of a week before. Two hours after, another spoonful of the Solar Tincture was taken with additional success; and the patient afterwards continued this medicine in the quantity of a table-spoonful, in a wine-glass of warm water, three times a day, for six days, at the expiration of which time her appetite and strength were surprisingly returned; and she was then put under a regular course of the Lunar Tincture. Twenty drops, in a wine-glass of mugwort tea, were taken every night and morning for thirteen successive days; and on the morning following, it being the full moon, with which her menses originally came, she had the consolation to find that every obstruction was removed, and that the due course of nature was completely re-established. The glandular swellings gradually subsided, her natural complexion quickly returned, and she now continues in blooming health, perfectly regular, free from all obstructions, and from every consequent complaint, thankful for the blessings of her recovery, and desirous of communicating the means to any unfortunate female under similar affliction;

tion; and to whom reference may at any time be had, by application to the author.

CHLOROSIS, OR GREEN SICKNESS; by some called the LOVE-FEVER.

This disease usually attacks virgins a little after the time of puberty, and first shews itself by symptoms of *dyspepsia* or bad digestion. But a distinguishing symptom is, that the appetite is entirely vitiated, and the patient will eat lime, chalk, ashes, salt, &c. very greedily; while at the same time there is not only a total inappetence to proper food, but it will even excite nausea and vomiting. In the beginning of the disease, the urine is pale, and afterwards turbid; the face becomes pale, and then assumes a greenish colour; sometimes it becomes livid or yellow, the eyes are sunk, and have a livid circle round them; the lips lose their fine red colour; the pulse is quick, weak, and low, though the heat is little short of a fever, but the veins are scarcely filled; the feet are frequently cold, swell at night, and the whole body seems covered with a soft swelling; the breathing is difficult: nor is the mind free from agitation as well as the body; it becomes irritated by the slightest causes; and sometimes the patients love solitude, and become sad and melancholy. There is a retention of the menses throughout the whole course of the disorder; which eventually fix on the vital organs; and death ensues.

The above complaint indisputably arises from stifling or suppressing the calls of nature at this vernal season,

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or juvenile spring of life, when the primary command of God, "*encrease and multiply*," is most sensibly impressed upon the whole human fabric. Every tube and vessel appertaining to the genital system, being now filled with a procreative liquor, excites in the female a powerful, yet perhaps involuntary, irritation of the parts, which strongly solicits the means of discharging their load by venereal embraces. These, from prudential motives, being often necessarily denied, the prolific tinctures seize upon the stomach and viscera, pen back and vitiate the catamenia, choak and clog the perspirative vessels, whereby the venal, arterial, and nervous, fluids, become stagnant; and a leucophlegmatia, or white flabby dropfical tumour, pervades the whole body, and quickly devotes the unhappy patient to the arms of death. In this manner, I am sorry to remark, are thousands of the most delicate and lovely women plunged into eternity, in the very blossom of life, when female excellence is but budding forth, big with the promised fruit of rapture and delight! How much then does it become the duty of parents and guardians, who have daughters or wards in situations like these, and where no very gross objection can arise, to suffer them to marry with the men they love, otherwise to provide suitable matches for them; since this will effect the most rational and most natural cure, by removing the causes of the complaint all together. If, however, matrimony be not then convenient, nor likely, in a short time, to take place, recourse must forthwith be had to proper regimen, and physical aid, other-

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wife delirium or consumption will quickly ensue. The best method of regimen is laid down in my Family Physician, page 217, which, if well observed, in addition to the following course, will generally perform a cure. Take leaves of mugwort, briony, and pennyroyal, of each an handful; infuse them four days in two quarts of soft water, and then pour off the clear liquor for use. Take a gill-glass three parts full, with thirty drops of the LUNAR TINCTURE added to it, three times a day, viz. morning, noon, and night, till the decoction be all used. Then reduce the dose to twenty drops of the Tincture in a wine-glass of cold spring-water morning and evening, for fifteen days; after which it should be taken only once a day, or every other day, until the patient finds herself entirely free from every symptom of the disease. For this malady, it is the only specific hitherto known; it-unlogs the genital tubes, purges and cools the uterus and vagina, promotes the menstrual discharge, cleanses the urinary passages, dissolves viscid humours in the blood, sharpens the appetite, stimulates the nerves, and invigorates the spirits, which in all stages of *chlorosis* are so apt to be depressed. When this disorder is not very obstinate, nor far advanced, let the patient take from twenty to thirty drops of the Lunar Tincture, in a wine-glass of cold spring-water for thirty or forty days successively, and it will perform a cure without the trouble of preparing the decoction. In this malady, I have lately had the happiness of completing an elegant cure, which I shall mention here, merely for the information of

of such unfortunate maids as may be languishing under the same deplorable circumstances. The following is a literal statement of the

C A S E.

A young lady, turned of seventeen, had been afflicted with *chlorosis* almost three years. In the early part of the malady, she conceived an unconquerable appetite for wood-cinders, concreted mortar, tobacco-pipes, sealing-wax, &c. Her courses appeared at different intervals of the disease, but always irregular, and more or less in a vitiated state. About half a year preceding my attendance, this flux had totally ceased; but, upon the approach of every new moon, with which her menses originally came, she was afflicted with pains in the back and loins, heaviness and turgidity about the region of the womb, and other customary symptoms of the catamenia; yet not the smallest show could be brought to appear. A little before this, the lady's affections had been placed on a young man in the neighbourhood, but whose situation in life was by no means on a scale adapted to the views of her father and family. The moment therefore this attachment was discovered, the lady was confined to her apartment, and neither suffered to take exercise or fresh air, but when it suited for some trusty attendant to accompany her. This confinement heightened her disease, and brought on a settled melancholy, a green fallow complexion, dejected spirits, universal lassitude, and wasting of the flesh. The morbid state of her body having thus undermined her constitution, without attracting either her own or her

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father's care, the disorder fell upon the vital organs, and with so rapid a progress, that within twenty-four hours she was seized with an ardent fever, attended with loss of appetite, delirium, and a total privation of speech. In this shocking state she had the alternate advice of three physicians of the first respectability; but the disorder increasing, and putting on the most dangerous symptoms, after having baffled their utmost skill, a consultation was had, and the miserable patient was consigned to the grave.

Under these deplorable circumstances it was my lot to be called in; and, upon a close examination of the patient, scarcely any visible signs of life remained. The pulse had nearly subsided. The action of the heart and lungs could scarcely be discerned. The eyes were sunk, and fixed; yet retained an uncommon look of expression and sentiment. At this time she had a large blister round her neck, another on the pit of her stomach; a third, very large, between her shoulders; a fourth on her head; a fifth, and sixth, inside the ankles and legs. Venesection had been so often repeated, that scarce blood enough remained to support the heat and action of the heart. In this exhausted state, I only administered three table-spoonfuls of the Solar Tincture, *undiluted*, at intervals of little more than an hour apart; and, in the space of four hours after, I had the heart-felt satisfaction of seeing the energy of the blood restored; pulsation gradually resumed its action; the lungs were dilated; respiration became free; and a profuse sweat, which the Tincture induced, fortunately

nately opened the perspiratory vessels ; and the patient began to give evident signs of ease and sensibility. Warm nourishing food was afterwards taken in small quantities ; and I was enabled to remove the blisters, and perform the dressings, without pain or torture to the languid patient. The Solar Tincture was now administered every day for ten days, in the quantity of a table-spoonful in a wine-glass of warm barley-water, three times a day, and once in the night, whenever watchfulness came on. About the middle of the seventh day, she began to articulate, though not a word had been uttered for upwards of six weeks before ; and on the tenth day, her voice and bodily functions were so far restored, that I deemed it safe to give her an interval of six days rest, without any medicine whatever. I had the happiness to find my expectations completely answered ; for nature, assisted by nourishing food, effected more than a profusion of drugs ; so that, in little more than twenty days, my patient was able to walk her room, and to put herself under a course of the Lunar Tincture. This she persisted in, with nourishing diet, seconded by occasional but very gentle airings in the carriage, for near a month longer ; when, on the approach of the ensuing new moon, to the unspeakable joy of her friends, the menstrual flux resumed its natural course : the comfort and relief of which was so visible to the patient, that she in ecstasy exclaimed, “ *my sufferings are at an end.*” This lady has ever since continued to improve in health and spirits in so surprising a degree, that, looking back on her late mi-

ferable and reduced state of body, forms a contrast so great as almost to exceed belief. Yet the lady and her worthy parent, are at all times ready to authenticate the fact, to any reputable enquirer, or to the friends of any unfortunate female labouring under a similar affliction.

OF THE FLUOR ALBUS, OR WHITES.

The fluor albus, female weakness, or whites, as it is commonly called, is a disease of the womb and its contiguous parts; from which a pale-coloured, greenish, or yellow, fluid, is discharged, attended with loss of strength, pain in the loins, bad digestion, and a wan sickly aspect. The quantity, colour, and consistence, of the discharge, chiefly depend upon the time of its duration, the patient's habit of body, and the nature of the cause by which it was produced. Weakly women of lax solids, who have had many children, and long laboured under ill health, are of all the most subject to this disagreeable disease; from which they unfortunately suffer more severe penance than others, as the nicest sensations are often connected with such a delicacy of bodily frame as subjects them to it. In Holland it is very frequent, and in a manner peculiar to the place, from the dampness of its situation; the surrounding air being so overcharged with moisture as to relax the body, stop perspiration, and throw it upon the bowels or womb; producing in the first a diarrhœa or flux, in the last the fluor albus or female weakness. The discharge often proceeds from the vessels subser-

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vient to menstruation; because, in delicate habits, where those vessels are weak, and consequently remain too long uncontracted, the fluor albus sometimes immediately follows the menses, and goes off by degrees as they gradually close. It also comes from the mucus glands of the womb, as is particularly evident in very young females of eight or ten years old; in whom, though very rarely, it has been observed, and where it must then necessarily have escaped from those parts, as the uterine vessels are not sufficiently enlarged for its passage at so early a period.

Sometimes, as in women with child, it proceeds from the passage to the womb, and not from the womb itself; which, during pregnancy, is closely sealed up, so that nothing can pass from thence till the time of labour. The application of those instruments called pessaries, from the pain and irritation they occasion, are also apt to bring on this discharge. The fluor albus has been supposed to supply the want of the menses; because, where the first prevails, the last are generally either irregular or totally wanting: but it might more properly be said, that the presence of the fluor albus, which is a preternatural evacuation, occasions the absence of that which is natural; as is evident from the return of the menses after the fluor albus has been cured. Indeed, when this discharge appears about the age of thirteen or fourteen, and returns once a month, with symptoms like those of menses, then it may be deemed strictly natural, and therefore ought not to be stopped. The fluor albus may be distinguished into two kinds.

kinds. The first arises from a simple weakness, or the relaxation of the solids; which may either be general, where the whole bodily system is enervated and unstrung; or partial, where the womb only is affected, in consequence of hard labour, frequent miscarriages, a suppression or immoderate quantity of the menses, or a strain of the back and loins. In the first case, the discharge being generally mild, may be easily taken away. In the second, it may proceed from a vitiated or impure blood, where the body, from thence, is loaded with gross humours, which nature for her own security and relief thus endeavours to carry off. In such cases, the discharge is often of a reddish colour, like that from old ulcerous sores; being sometimes so sharp as to excoriate the contiguous parts, and occasion a smarting and heat of urine. A deep-seated darting pain, with a forcing down, attending such a discharge, is a very dangerous and alarming sign, and indicates an ulcerated or cancerous womb. This malignant state of the disease, if of long continuance, is extremely difficult of cure; and disposes the patient to barrenness, a bearing down, dropsy, or consumption. In short, as this is a malady of the most disagreeable kind, which by long continuance or neglect becomes difficult of cure, and often proves fatal, it were to be wished that women, on such occasions, would be more attentive to their own safety, by using all possible means, in due time, to prevent the disorder.

As women are sometimes connected with those who do not conscientiously regard their safety, it is a circumstance

cumstance of the utmost consequence to distinguish a fresh venereal infection from the fluor albus or whites: for, if the first be mistaken for the last, and be either neglected or improperly treated, the worst consequences may arise. In addition therefore to what I have stated in page 219 of my Family Physician, the following signs will serve to inform the patient whether there be occasion for her doubts or not. A fresh infection, called gonorrhœa, is malignant and inflammatory; the fluor albus most commonly arises from relaxation and bodily weakness: and therefore the remedies proper in the first disorder would render the last more violent, by locking up and confining the infectious matter. In the gonorrhœa, the discharge chiefly proceeds from the parts contiguous to the urinary passage, and continues whilst the menses flow; but in the fluor albus it is supplied from the cavity of the womb and its passage, and then the menses are seldom regular. In the gonorrhœa, an itching, inflammation, and heat of urine, are the fore-runners of the discharge; the orifice of the urinary passage is prominent, and the patient is affected with a frequent irritation to make water. In the fluor albus, pains in the loins, and loss of strength, attend the discharge; and, if any inflammation or heat of urine follow, they happen in a less degree, and only after a long continuance of the discharge, which, becoming sharp and acrimonious, excoriates the surrounding parts. In the gonorrhœa, the discharge suddenly appears, without any evident cause; but in the fluor albus, it comes on more slowly, and is often produced

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by irregularities of the menses, frequent abortion, strains, or long-continued illness. In the gonorrhœa, the discharge is greenish or yellow, less in quantity, and not attended with the same symptoms of weakness. In the fluor albus, it is also often of the same colour, especially in bad habits of body, and after long continuance; but is usually more offensive, and redundant in quantity. The whites often afflict maids of a weakly constitution, as well as married women and widows; and indeed there are few of the sex, especially such as are sickly, who have not known it more or less. For whatever disease renders the blood poor, foul, or viscous, and reduces a woman to a languid condition, is commonly succeeded by the whites, which, when they come in this manner, continue to weaken the body more and more, and are in great danger, without speedy remedy, of wearing away the patient, and making her a miserable victim to death. Let no woman, therefore, neglect this disorder, when she finds it on her, but endeavour to obtain an immediate cure. The regimen and general management are pointed out in the Medical Part of my Family Physician, page 220; but, in lieu of all other medicines, make a decoction of tormentil-root, bistort, comfrey, and red-rose leaves; take a gill-glass three parts full, and add to it thirty or forty drops of the Lunar Tincture, which must be persisted in morning, noon, and night, for ten days; then take it morning and evening only for ten days more; after which discontinue the decoction, and take the Tincture every morning for a month, twenty drops in a wine-glass

MEDICAL MIRROR. 21

glass of cold spring-water, the disease will be found gradually to abate: and, upon any symptoms of a return of it, take fifteen to twenty drops of the Tincture in a wine-glass of cold water every morning for a week, and it will go entirely off; as hath been verified in a great number of patients, who are ready to testify that they owe their cure, even in the most obstinate cases, entirely to the Lunar Tincture.

OF BARRENNESS, OR INFERTILITY.

Barrenness is such a state of a woman's body, as indisposes it, upon the use of the natural means, to conceive and propagate her species. This proceeds from many sources, which may be reduced to these two general heads: First,---An indisposition of the parts to receive the male semen in the act of copulation, or that vital effluvium streaming from it, which alone can impregnate the ovaria. Secondly,---An inaptitude in the blood to retain and nourish the vital principle after it is communicated, so as to make it grow and expand its parts, till it becomes a proper foetus. Conception is also hindered by a hectic, hydropic, or feverish, sickly habit; by a deficiency or obstruction of the monthly courses, which impoverishes the fluids; by the whites, which, continuing too long, relax the glands of the womb, and drown, as it were, the prolific particles; and too often by a *vice*, which utterly destroys the tone and vigour of the parts; as is fully exemplified in my Family Physician, page 221. Preparatory to the cure of infertility, it is proper to use evacuations, unless any

particular symptom shews them to be dangerous. Bleeding, lenient purgatives, such as the solutive electuary, and a gentle vomit of ipecacuanha, especially if the person be plethoric or cacochymic, cannot but be of great service; then proceed with the following strengthening electuary: take roots of satyrion or eringo candied, of each one ounce; powders of cinnamon, sweet-fennel seeds, and preserved ginger, of each half an ounce; mace, roots of contrayerva and Spanish angelica, of each one drachm; troches of vipers, one ounce; juice of kermes, six drachms; tincture of cantharides, half a drachm; syrup of cloves, a sufficient quantity to make an electuary. Let the quantity of a large nutmeg be taken every morning early, at about five o'clock every afternoon, and at night going to bed; and, immediately after taking the electuary, drink a wine-glass full of the following infusion, adding to it from twenty to thirty drops of the Lunar Tincture, viz. take cinnamon powdered one ounce; of sweet-fennel seeds bruised, and lavender-flowers, of each half an ounce; Spanish angelica-root, ginger, contrayerva, mace, and cochineal, of each one drachm and a half; canary-wine, two quarts: infuse according to art for two or three days, and strain off the infusion for use. Continue the electuary for ten days successively; then omit a week, and continue it for ten days more; after which continue the infusion and Tincture only, three times a day, for ten days more; then take it only twice a day for a month, or as long as the case requires, adding from fifteen to thirty drops of the
Tincture

Tincture to each glass, as the age or constitution of the patient may require. This course will be found most excellent for barrenness and debility; particularly while thus assisted by the Lunar Tincture; which will greatly warm and rectify the blood and juices, increase the animal spirits, invigorate and revive the whole human machine, and not only raise the appetite to venereal embraces, but remove the usual impediments to fertility; prepare the womb for performing its office, and the ova for impregnation. The Tincture warms, comforts, and excites, the generative parts to admiration, and seldom fails of curing all common occasions of barrenness, in a month or six weeks, if duly followed; as a proof of which I beg leave to add the pleasing circumstances of the following singular

C A S E.

A young lady of rank and fortune, but of a delicate frame, entered into the marriage-state about four years ago. Instead of deriving from it that blissful gratification which gives the honoured name of mother, she became weak, languid, pale, and melancholy. The whole nervous system was relaxed,---the natural functions of the body were suspended,---oedematous tumours obstructed the sanguiferous passages, whence incurable barrenness, and lingering consumption, were the sad prospects left in view. In this melancholy state of body and mind, by advice of her physician, when all hopes were at an end, she was put under a regular course of the Lunar Tincture, which, to the astonishment of all, gradually deturged the obstructed vessels
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---propelled the animal juices through the system---strengthened and braced the nerves---induced a regular habit---restored the sparkling eye and blooming cheek, and gave new vigour to the animal functions---the result of which has been, that before the end of the ensuing year, after her health was thus recovered, the lady became the happy mother of a SON and HEIR, to the inexpressible joy of an affectionate husband and a sympathising family!---For the sake of females labouring under a similar disease, reference to the above pleasing fact is permitted to be had by all respectable enquirers, at the author's house, in Upper Titchfield-street, Cavendish-square.

INDISPOSITIONS ATTENDANT ON PREGNANCY.

Though pregnancy is not a disease, but rather a natural alteration of the animal economy, which every female is formed to undergo, yet it is attended with a variety of complaints, which require great attention; but for the cure or alleviation of which, medical aid has proved very deficient. In these complaints, however, the Lunar Tincture exerts most extraordinary properties, and excels whatever has been heretofore offered under a medical form. It is an universal purifier of those heterogeneous particles which produce nausea, and arise from the combining efforts of the masculine and feminine tinctures; from whence, according to the grossness of the procreative fluids at the time of conception, proceed vomiting, pains in the head

head and stomach, fainting, &c. occasioned by the jarring elements arising from the disproportion in the heat and active principle of the constituent parts of the male and female seed; which is not only attended with great debility and depression to the mother, in her whole nervous system, but often with hereditary diseases, and dreadful consequences to the infant offspring. Indeed so great has been the conflict of the male and female procreative tinctures for the mastery or predominant power, while passing through the circulating mass or habit of the mother, that the most curious and astonishing phenomena have, on many occasions, been observed to result from it. In a small village in Somersetshire, in the year 1759, a girl was born with the hair on her head of two remarkably distinct colours; the right side, from an exact parallel line which divided the skull into two equal parts, was almost black; but the left side, from the same line, was of a reddish yellow. As she grew up, the dark hair became of a jet black, exactly like that of her father; whilst the other became of a strong caroty red, precisely resembling that of her mother; and, after the age of puberty, the hair on the privities, and under the arm-pits, as well as on her arms and legs, was diversified in the same manner; that on the right side, all the way down, from head to foot, being black; whilst that on the left was entirely red. The young woman lived till the 28th year of her age, and was resorted to as a great curiosity.

Another well-known yet remarkable instance of this conflict of the male and female procreative tinctures at
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the time of impregnation, was the case of a man who a few years since kept a public house in Tooley-street, Southwark. His father was a white man, belonging to one of the West-India packets; and his mother was a negro girl, whom he had taken a fancy to, and purchased on the arrival of one of the Guinea slave-ships at the island of Jamaica. He brought her with him to London, and in the course of the ensuing year, she was delivered of a son, the whole right side of which was white like the father; but the whole of the left side was black like the mother. As he grew up, this visible distinction became more strongly marked; and during the time he kept the above public-house in Tooley-street, he was resorted to by an immense concourse of people, who flocked there to spend their mite, in order to be satisfied that so great a curiosity really existed. The whole of his body appeared to be intersected by an exact parallel line, by which the efforts of conception seem to have united the male and female tinctures in precise equilibrio, without suffering them to intermix in coagula, or in impregnating and expelling the ovum from the ovaria, to its suspended state in the uterus. Hence the hair on the right side was long and brown, like that of the father; and half the face, neck, body, and privities, with the arm, thigh, leg, and foot, on the right side, were white; while the corresponding parts on the left side were black, like that of the mother, with half the hair on the privities and head black and woolly, exactly like that of a true negro.

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A still more curious and striking example of this astonishing effort in the male and female procreative fluids, is verified in the case of Mr. John Clark, of Prescott-street, Goodman's-fields. His father was a native of Africa, who, by dint of good fortune, had amassed a considerable sum of money, and settled in London. He married a remarkably healthy young woman, a native of Devonshire, who had been some time his servant. By her he had two sons and three daughters, who were mulattos, except the eldest son, who was the first born, and the person above alluded to. From the head to the navel, all round his body, he was remarkably fair, had a fine skin, handsome round features, light-brown hair, and sanguine complexion, like his mother; but from the navel downwards he was completely black, with short black woolly hair on the privities, exactly like the father. At the age of thirty, he married a young lady of good family and fortune, but of a delicate disposition. For near three months he had the address to conceal this deformity of colour from the knowledge of his wife, by wearing flesh-coloured silk drawers and stockings, which he pretended were lined with flannel to keep off the rheumatism, with which he had been sorely afflicted, even to a degree that endangered his life, every time he attempted to leave them off. It happened however, from some neglect of concealment before going to sleep, that the curiosity of his wife was strongly excited; and the opportunity proving favourable in other respects, it being

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quite day-light in the morning, and her husband fast asleep, she eagerly proceeded to satisfy her doubts. Gently turning down the bed-clothes, and removing the other impediments in the way of a complete inspection, she no sooner discovered the real state of things, than she shrieked out vehemently, and fainted away ! The husband, thus suddenly awakened, beheld his wife in a fit, and saw with sorrow and regret the consequences of a discovery which entirely resulted from his own neglect. He immediately arose, called up the servants, and procured medical assistance with all convenient speed ; but in vain---the sudden surprise, added to the mortification and terror of mind, had so powerful an effect, that the lady died in convulsions, nearly two months gone with child. I have often lamented that fortune did not throw me in the way at this critical juncture, for two reasons ; in the first place I have the vanity to think I could have saved the patient's life ; but, had I failed in that, I would have persuaded Mr. Clark, from motives of philosophical speculation, and for the improvement of medical science, to have suffered me to open the womb of this unfortunate lady, in order to extract the foetus ; which, under the circumstances of the uncommon conformation of the father, might have enabled me to throw a light on this very curious subject of occult enquiry, perhaps so as to have accounted, more obviously, for the jarring conflicts and struggling efforts of the masculine and feminine tinctures ; to which alone we are to look for the formation

tion of hermaphrodites, the production of monsters, &c.*

Sympathy and antipathy most certainly operate very powerfully on females in the early state of pregnancy, and might, as was then suggested, have had a principal share in carrying off the above unhappy patient, while no means were used to counteract their influence on the mass of blood. Sudden frights, longing and loathing, and all marks on the foetus, are obviously derived from this cause, and can only be corrected by giving energy and stimulus to the circulating system, whereby the functions both of mind and body are strengthened, and

* We find many similar accounts, in different authors, of party-coloured people. Thus we are told, by Buffon and others, that copulation of a black man with a white woman hath often produced a pied or spotted race, living instances of which are to be found in both the Indies. A very remarkable case is that of Maria Herig, who was spotted all over the body, and covered with hair, like the leopard. She was born at Dackstull in Lorraine in 1770, and was exhibited in Paris in 1774. Both the skin and the hair were of a tan-colour; and besides these hairy spots, her stomach and belly were covered with longish hair, of a brown colour on one side, and lighter on the other.—Somewhat similar, and not less remarkable, was the porcupine man, who was born in Suffolk in 1710, and was exhibited in every principal town in England. The skin of his body was covered with excrescences like thorns or prickles; and about the thickness of packthread. His face, the palms of his hands, and the soles of his feet, were the only parts that were free from them. They were of a reddish brown, and had such a degree of hardness and elasticity, as to rattle when the hand was moved over the body. They were half an inch long in some parts, and shorter in others. They did not appear till two months after his birth; but, what is most extraordinary, they dropped off every winter, and were renewed in the spring. He had six children, all of whom, like their father, were covered with these excrescences.

the nervous fluid fortified and protected against the sudden impression of external objects. It seems to be admitted by many eminent practitioners, that the diseases incident to a pregnant state in the early months arise from sympathy; whilst those peculiar to the more advanced stages of gestation, are produced by the stretching and pressure of the uterus on the contiguous viscera. Thus heart-burn and diarrhoea, tension and pains of the breast, nausea and head-ach, desire of unnatural food, tremors, and dejected spirits, fainting and hysteric fits, premature menstruation, and consequent abortion, proceed from the first of these causes; while costiveness, stranguary, cramp, and cholic, appear to result from the other. And though the celebrated Dr. Stahl, Dr. Cullen, and others, have so much differed as to the theory of these diseases, yet they all agree that gentle opiates, aromatic infusions, strengthening bitters, and medicines calculated to give energy to the languid state of the circulation, and to purify the gross and viscid elements which oppress the stomach and viscera, are the only proper remedies to be administered. Now the Lunar Tincture possesses the aromatic and astringent virtues in an admirable degree; and is elegantly adapted to invigorate and assist the active faculties of nature, in expelling all viscid humours from the stomach and bowels; and being compounded of the most subtle and occult elements, which preserve the vital principle, it hence produces the most salutary effects on all women in a state of pregnancy, by stimulating the procreative faculty to the formation of the

the finest children; correcting and purifying the procreative fluid from infection or disease; preventing moles or false conceptions, removing all loathings, longings, or vomiting, and effectually preventing abortion, from any cause whatever.---For these reasons, when a woman enters into a state of matrimony, she would do well to take twenty drops of the Lunar Tincture every other morning to promote conception; she should then continue it three times a week, from conception to the end of the fourth month; then it may be omitted till a fortnight before her time, when she should take twenty drops in a wine-glass of cold spring-water, every morning till her labour, at which time it will wonderfully strengthen her, assist her throws, facilitate the birth, promote the lochia, and carry off the after-pains. She might take it occasionally during the month, in any symptoms of cold, fever, or hysterics, diluted in a wine-glass of warm barley-water, about the middle of the day.

Women who are subject to miscarriages, should never fail to take this medicine, from the time they have reason to believe they are pregnant, until a full month after they have quickened. It may be taken once, twice, or thrice, a day, or every other day, as the urgency of the case may require, from twenty to thirty drops, in a glass of forge-water; or in soft spring-water, in which common oak-bark has been steeped; and she will effectually get over all causes of abortion. Women after sudden miscarriages, or bad labours, will find wonderful relief by taking twenty drops of it in

a wine-glass of warm barley-water, for a week or ten days. Nurfes, also, whose milk is griping, or defective, should take it once or twice a day, or as often as occasion may require. The intention will quickly be experienced, the milk will be purified and augmented, and all the fluid secretions promoted in a manner productive of sound health, both to the mother and child,---In cafes where œdematous fwelling of the legs and labia are occasioned by the interruption of the refluent blood from the preffure of the diftended uterus on the vena cava;---in violent floodings---in nervous fpafms---in epileptic fits, and in obftinate convulfions, where the *vis vitæ* must be fupported by replenifhing the veffels with the utmoft fpeed---recourfe fhould be had to the Solar Tincture, which in the moft dangerous cafes has been found to give immediate relief; and, if duly perfifted in, will fcarcely ever fail to effect a cure.

STATE OF WOMEN AT THE TURN OF LIFE.

The moft critical and dangerous time of a woman's life is that wherein the menfes ceafe to flow, which ufually happens between forty and fifty years of age. The great change that this produces, by fo copious a drain being turned into the habit without previous preparation, is the fole caufe of its danger. Every woman muft be more or lefs fenfible when this period arrives, and fhould conduct herfelf accordingly; for, when the menfes are about to go off, they appear for the moft part irregularly, both in time and quantity, once in a fortnight, three, five, or fix, weeks; fometimes

times very sparingly, and at other times in immoderate quantities. For want only of necessary care and attention, during the time that the menses thus give symptoms of their departure, many and various are the complaints that ensue; amongst which are cold chills, succeeded by violent flushings of the face, and heats of the extremities; restless nights, troublesome dreams, and unequal spirits; inflammations of the bowels; spasmodic affections; stiffness in the limbs, swelled ancles, sore legs, with pains and inflammation; the the piles, and other symptoms of plenitude. But all this might easily be prevented, by attending to a due regimen, and taking these Tinctures, as occasion may require. Whenever a woman has reason to suspect her menses are about to leave her, let her lose four, five, or six, ounces of blood, as her habit of body will admit; then let her make a decoction, by taking gentian-roots, one pound; senna and orange-peels, of each half a pound; pour upon them a gallon of hot water, and, after it has stood twenty-four hours, pour off the liquor for use. Let her take from twenty to forty drops of the Lunar Tincture in a gill-glass full of the above decoction, every night and morning for ten days; then let her continue it every morning for ten days more, and afterwards once every two or three days, or oftener if the terms are of an ill colour and scent, until they are corrected. This course must be followed every spring and fall, for a month or six weeks successively, by all women who find their menses come irregularly, or too sparing, until they entirely cease; after which
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let the patient put herself under a course of the Solar Tincture, for a month or six weeks, taking one spoonful in a wine-glass of warm water every night and morning for a week; then let it be taken only once a day, in cold water, for the residue of the time; and if she take, occasionally, two table-spoonfuls of the Solar Tincture, diluted in a tumbler of warm water, as a beverage after dinner or supper, instead of wine or brandy and water, it will be productive of great benefit in establishing an healthful state of her blood, and carrying off the viscid humours generally produced by the menstrual flux returning into the habit.

Should it at this time happen, which it often does, that the terms flow too abundantly, and produce a flooding, the patient must immediately lose six or eight ounces of blood, and be kept as much as possible at rest, with her head low, until the medicine has had time to take effect; let her diet be spare, but not too lax; and let her apply to the following course: Take conserve of red-roses, marmalade of quinces, juice of kermes, candied nutmegs, syrup of quinces, and syrup of coral, of each half an ounce; aromaticum rosalum, and astringent saffron of iron, of each two drams; oil of cinnamon, six drops; mix into an electuary, (which might be made up by any apothecary, if the receipt be sent him,) and take the quantity of a large nutmeg every day at noon for six, eight, or ten, days, or longer, as the urgency of the case may require, drinking immediately after it twenty drops of the Lunar Tincture in a wine-glass of warm water; the flooding by
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mediately after it twenty drops of the Lunar Tincture in a wine-glass of warm water ; the flooding, by this means, will gradually abate, the feverish symptoms will go off, the back will be strengthened, the womb-vessels cleansed, and the patient wonderfully restored. After the tenth day, in most cases, the electuary might be discontinued ; and the Lunar Tincture should then be taken every morning for a month, from fifteen to twenty drops, according to the constitution of the patient ; by which time the parts will be braced, comforted, and coiled up ; so as to fear no danger of a relapse. About a month after, let her undergo a course of the Solar Tincture, for the purpose of rectifying and stimulating the mass of blood ; this should be taken for a month ; a table-spoonful night and morning in a wine-glass of cold spring-water for the first ten days ; and then once a day only for the residue of the time ; the good effects of which will be sensibly and quickly felt.

The intention of nature in returning this flux back into the habit, is to nourish and preserve life, not to destroy it. Until the age of puberty, girls require this blood for the sustentation and nourishment of their bodies ; when that is sufficiently established, it is applied to the purposes of nourishing the foetus, and of suckling the infant after it is born. When child-bearing ceases, and the eve of life comes on, the flux is returned back, to comfort and preserve it ; therefore, if women were but careful to observe a regular course before this flux returns upon them, by adopting the

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methods I have prescribed, and by taking the medicine spring and fall for two or three years previous to the time, they might not only escape the perils and dangers attendant on this period, but would lay the foundation of a settled state of health, and enjoy a sound constitution of body to extreme old age.

OF MASCULINE OR SOLAR DISEASES.

Solar diseases are all such as proceed from a hot and dry cause, or have their origin in the blood and lymph. For as the beams flowing from the sun are the fountain of life and heat to the great world, or universal system of nature, so the blood, flowing from the heart, is the fountain of life and heat to the little world, or universal system of the *microcosm*, or body of man. And again, as the stream of rays from the sun regulates the seasons, and produces the variety of climates, so the stream of blood in man's body, as affected by the sun, regulates and diversifies the form and figure of the whole race of human beings. As seasons and climates are subject to the external elements, which are still governed by the superior influence of the sun, so are they rendered either mild, healthful, and productive; or turbulent, pestifential, and barren. Just so the whole circulating mass is affected by change of climates and seasons, and by all the variations and agitations of the external elements; and hence diseases are induced in the blood, and are either mild, ardent, or acute, in proportion as the sanguiferous fluid becomes disordered and impaired by the action of the ambient, or contiguous atmosphere.

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Thus we perceive the solar influence on the human frame, and discover that the origin of disease is in the blood; for, no longer than this vital stream is kept in due circulation, pure, and uncontaminated, can animal life be sustained, or the body preserved in health and vigour.

From the express words of scripture, Levit. xvii, 11, 14. Deut. xii. 23. we are warranted to infer, that "*in the BLOOD is the LIFE;*" and there is not a doubt but the living principle of the blood constitutes the life of the body. Of this opinion was the celebrated Hervey, as well as many of the ancient philosophers and physicians; and the late Mr. John Hunter declared himself to be of the same way of thinking. We find the blood unites living parts, in some circumstances, as certainly as the yet recent juices of the branch of one tree unite it with that of another. Were either of these fluids to be considered as extraneous or dead matters, they would act as stimuli, and no union would take place in the animal or vegetable kingdoms. This argument Mr. Hunter established by the following experiment. Having taken off the testicle from a living cock, he introduced it into the belly of a living hen, Many weeks afterwards, upon injecting the liver of the hen, he injected the testicle of the cock likewise, which had come in contact with the liver, and adhered to it. In the nature of things, there is not a more intimate connection between life and a solid than between life and a fluid. For, although we are more accustomed to connect it with the one than the other, yet the only

real difference which can be shewn between a solid and a fluid is, that the particles of the one are less moveable among themselves than those of the other. Besides, we often see the same body fluid in one case and solid in another. The blood will also become vascular like other living parts. Mr. Hunter affirms, that, after amputations, the coagula in the extremities of arteries form vessels, and may be injected by injecting these arteries; and he had a preparation by which he could demonstrate vessels rising from the centre of what had been only a coagulum of blood, and opening into a stream of circulating blood. If blood be taken from the arm, in the most intense cold which the human body can bear, it raises the thermometer to the same height as blood taken in the most sultry heat. This is a strong proof of the blood's being alive; for living bodies alone have the power of resisting great degrees both of heat and cold, and of maintaining in almost every situation, while in health, that temperature which we distinguish by the name of animal heat. Blood is likewise capable of being acted upon by a stimulus; for it coagulates from exposure, as certainly as the cavities of the abdomen and thorax inflame from the same cause. The more it is alive, that is, the more the animal is in health, it coagulates the sooner on exposure; and the more it has lost of its living principle, as in the case of violent inflammations, the less it is sensible to the stimulus produced from its being exposed, and it coagulates the later. We may likewise observe, that the blood preserves life in different parts of the body,

When the *nerves* going to any part are tied or cut, the part becomes paralytic, and loses all power of motion ; but it does not mortify. If the *artery* be cut, the part dies, and mortification ensues. What keeps it alive in the first case ? nothing but the living principle, which alone can keep it alive ; and this phenomenon is inexplicable on any other supposition, than that the life is contained in the blood. Another argument is drawn by Mr. Hunter from a case of a fractured os humeri. A man was brought into St. George's Hospital for a simple fracture of the os humeri or arm, and died about a month after the accident. As the bones had not united, Mr. Hunter injected the arm after death. He found that the cavity between the extremities of the bones was filled up with blood which had coagulated. This blood was become vascular, or full of vessels. In some places it was very much so. He does not maintain that all coagulated blood becomes vascular : and indeed the reason is obvious ; for it is often thrown out and coagulated in parts where its becoming vascular could answer no end in the system : as, for example, in the cavities of aneurismal sacs. If it be supposed, that, in such cases as that just now mentioned, the vessels are not formed in the coagulum, but come from the neighbouring arteries, it is equally an argument that the blood is alive : for the substance into which vessels shoot must be so. The very idea, that such a quantity of dead matter as the whole mass of blood circulates in a living body, is absolutely absurd,

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Those who have ventured to oppose this doctrine, and the evidence of scripture with it, consider the brain and nervous system as the fountain of life; and that, so far from receiving its life from the blood, the nervous system is capable of instantaneously changing the crasis of the blood, or any other animal fluid; and though the nervous system cannot continue its action for any length of time, if the action of the blood-vessels is suspended, yet the heart and blood-vessels cannot act for a single moment without the influence of the nervous fluid. For this reason, say they, it is plain we must suppose the nervous system, and not the blood, to contain properly the life of the animal, and consequently to be the principal vital organ. The secretion of the vital fluid from the blood by means of the brain, is, by the supporters of this argument, denied. They say, that any fluid secreted from the blood must be aqueous, inelastic, and inactive; whereas the nervous fluid is full of vigour, elastic, and volatile in the highest degree. The great necessity for the circulation of the blood through all parts of the body, notwithstanding the presence of the nervous fluid in the same parts, they say is, because some degree of tension is necessary to be given to the fibres, in order to fit them for the influx of the nervous fluid; and this tension they receive from the repletion of the blood-vessels, which are every where dispersed along with the nerves,

To follow this opinion through every argument would prove tedious and unnecessary, as the following short

Short observations will decide the matter absolutely against the patrons of the nervous system. In the first place, then, if we can prove the life of the human body to have been communicated from a fluid to the nervous system, the analogical argument will be very strongly in favour of the supposition that the case is so still. Now that the case once was so, is most evident; for the human body, as well as the body of every other living creature, in its first state, I have shown to be a gelatinous mass, without muscles, nerves, or blood-vessels. Nevertheless, this gelatinous matter, even at that time, contained the nervous fluid. Of this there can be no doubt, because the nerves are formed out of it, and have their power originally from it; and what is remarkable, the brain is observed to be that part of the animal which is first formed. Of this gelatinous or procreative fluid we can give no further account, than that it is the nutritious matter from which the whole body appears to be formed. At the original formation of man and other animals, therefore, the nutritious matter was made the substratum of the whole body, consisting of muscles, nerves, blood-vessels, &c. may more, it was the immediate efficient cause of the nervous power itself. Again, in the formation of the embryo, we see a vital principle existing as it were at large, and forming to itself a kind of regulator to its own motions, or a habitation in which it chooses to reside, rather than to act at random in the fluid. This habitation, or regulator, is undoubtedly the nervous system; but at the same time, it is no less evident that

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a nutritious fluid is the immediate origin of these same nerves, and of that very nervous fluid. Now we know, that the fluid which in the womb nourishes the bodies of all embryo animals, is necessarily equivalent to the blood which nourishes the bodies of adult ones; and consequently, as soon as the blood became the only nutritious juice of the body, at that same time the nervous fluid took up its residence there, and from the blood diffused itself along the nerves, where it was regulated exactly according to the model originally formed in the embryo. Perhaps it may be said, that the vital power, when once it hath taken possession of the human or any other body, requires no addition or supply, but continues there in the same quantity from first to last. If we suppose the nervous power to be immaterial, this will indeed be the case, and there is an end of reasoning upon the subject; but, if we call this power a volatile and elastic fluid, it is plain that there will be more occasion for recruits to such a power than to any other fluid of the body, as its volatility and elasticity will promote its escape in great quantities through every pore of the body. It may perhaps be objected, that it is absurd to suppose the blood capable of putting matter in such a form as to direct its own motions in a particular way: but even of this we have a positive proof in the case of the electric fluid. For if any quantity of this matter has a tendency to go from one place to another where it meets with difficulty, through the air for instance, it will throw small conducting substances before it, in order to facilitate its progress.

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Also, if a number of small and light conducting substances are laid between two metallic bodies, so as to form a circle, for example, a shock of electricity will destroy that circle, and place the small conducting substances nearer to a straight line between the two metals, as if the fluid knew there was a shorter passage, and resolved to take that, if it should have occasion to return. Lastly, it is universally allowed, that the brain is a secretory organ, made up of an infinite number of small glands, which have no other excretories than the medullary fibres and nerves. As a considerable quantity of blood is carried to the brain, and the minute arteries end in these small glands, it follows, that the nervous fluid *must come from the blood*. Now, there is no gland whatever, in the human or any other body, but will discharge the fluid it is appointed to secrete, in very considerable quantity, if its excretory is cut. Upon the cutting of a nerve, therefore, the fluid secreted by the brain ought to be discharged; but no such discharge is visible. A small quantity of glairy matter is indeed discharged from the large nerves; but this can be no other than the nutritious juice necessary for their support. This makes it plain, even to demonstration, that the fluid secreted in the brain is *invisible* in its nature; and as we know the nervous fluid hath its residence in the brain, it is very probable, to use no stronger expression, that it is the peculiar province of the brain to secrete this fluid from the blood, and consequently that the blood originally contains the vital principle.

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This fact being established, I shall now endeavour to describe the action of quickening, or mode by which life is communicated to the child in the womb, which usually takes place in the fifth month of pregnancy. Opportunities, however, of dissecting the human gravid uterus at or near this critical juncture occurring but seldom, it is with great difficulty that a subject of this delicate and abstruse nature can be treated with perspicuity, and is the principal cause why it has not been attempted by former physiologists. I have already shewn, that the rudiments of the embryo puts forth four membranes, viz. the placenta, the navel-string, the chorion, and amnios, which contain the fluid above-mentioned, in which the foetus floats. Until the period of quickening arrives, the embryo possesses only vegetative life, similar to that of a common plant; and its growth is nourished and preserved by the fluid in which it swims, until the nerves, veins, arteries, and vital organs, are entirely formed, and the circulation of its mother's blood is completed through them, which is conducted in the following manner.

The placenta is the medium by which the blood from the heart of the mother is communicated to that of the child; but to check its too rapid progress, which would overwhelm the tender vessels of the infant frame, the texture of the placenta is formed similar to that of a sponge, round like a cake, of considerable dimensions, and capable of great absorption, being chiefly made up of the ramifications of the umbilical arteries and vein, and partly of the extremities of the uterine vessels.

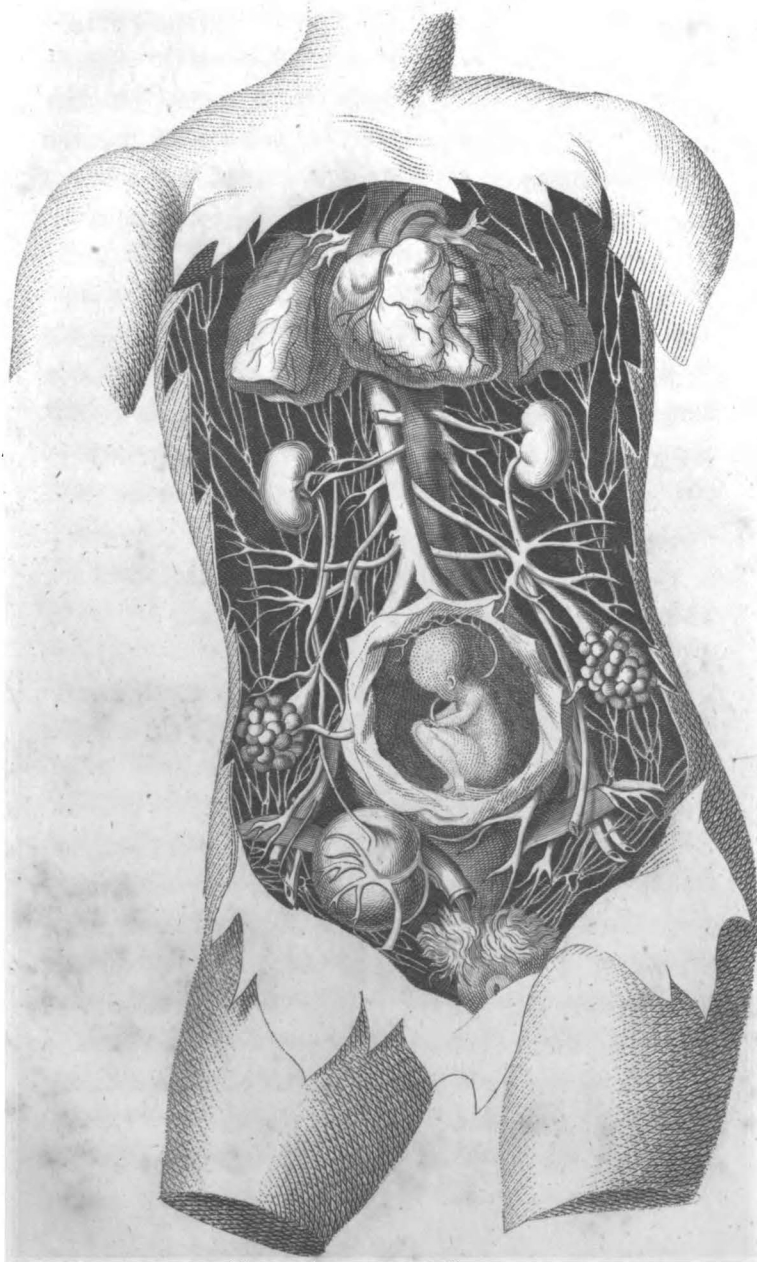
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The arteries of the uterus discharge their contents into the substance of this cake; and the veins of the placenta, receiving the blood either by a direct communication of vessels, or by absorption, at length form the umbilical vein, which passes on to the sinus of the vena porta, and from thence to the vena cava, and heart of the infant, by means of the *canalis venosus*, a communication that is closed up in the adult. But the circulation of the blood through the heart is not conducted in the fœtus as in the adult: in the latter, the blood is carried from the right auricle of the heart through the pulmonary artery, and is returned to the left auricle by the pulmonary vein; but a dilatation of the lungs is essential to the passage of the blood through the pulmonary vessels, and this dilatation cannot take place till after the child is born, and has respired. This deficiency, is therefore supplied in the fœtus by an immediate communication between the right and left auricle, through an oval opening, in the septum which divides the two auricles, called *foramen ovale*. The blood in the fœtus, is likewise transmitted from the pulmonary artery to the aorta, by means of a duct called *canalis arteriosus*, which, like the *canalis venosus*, and *foramen ovale*, gradually closes after birth. The blood is returned again from the fœtus to the mother through two arteries called umbilical arteries, which arise from the iliacs. These two vessels, taking a winding course with the vein, form with that, and the membranes by which they are surrounded, what is called the umbilical chord. These arteries, after ramifying,

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through the substance of the placenta, discharge their blood into the veins of the uterus, in same manner as the uterine arteries discharge their blood into the branches of the umbilical vein. So that, after quickening, the blood of the mother is constantly passing in at one side of the placenta, and out again at the other, for the nourishment of the child.

Now what we call the *action of quickening*, is that instantaneous, yet undefinable motion of the vital principle, which, the instant the foetus has acquired a sufficient degree of animal heat, and is completely formed in all its parts, rushes like an electric shock, or flash of lightning, conducted by the sanguiferous and nervous fluids, from the heart and brain of the mother, to the heart and brain of the child. At this moment the entire circulation begins; the infant fabric is completely set in motion; and the child becomes a living *soul*. As soon, therefore, as the circulation commences, the child starts into life; and the instant the circulation ceases, life ceases also. This *act of quickening* is therefore derived from the blood, and is so sensibly felt by the mother, that she often faints, and feels an internal depression of her animal and vital powers, which may be said, in some measure, to have departed from her. But the act of quickening does not take place in all women at the same period, nor always in the same woman at the same distance of time from her conception; nor is it governed by any given number of weeks or days after conception has taken place; but depends entirely on that instant of time, when the joint influence



The Action of Quickening.

Wadd del.

Published as the Act directs June 20th 1794, by E. Sibly.

Page 204p.

ence of animal heat, and an entire completion of the nerves, veins, arteries, and other parts and organs, of the foetus, are fitted and ready to receive and support a due circulation of the blood and juices; for this, and this alone, is the source of quickening, and the beginning of animal life. Strong and healthy women will therefore quicken sooner than the weak and delicate, by reason that their procreative and stimulating powers are more robust, and can sooner contribute that portion of animal heat, which is necessary to the entire completion of the foetus in all its parts; and which will happen sooner or later, according to the health and strength of the pregnant woman, and her sufficiency of menstrual blood to support the demand. For this flux will now be wholly taken up by the new subject, until the hour of birth; after which it either renews its monthly evacuation, as being redundant in the mother; or, if she suckles the child, it is then determined to the mammae, and is converted into milk.

Such is this curious and most admirable contrivance of nature, for the re-production and propagation of mankind; and such the nature and event of that mysterious action of quickening, which has hitherto been involved in so much darkness and obscurity, as to lead the unthinking multitude to suppose, that giving life to the foetus, was in every instance a new and distinct interposition of the Deity, instead of religiously imputing it to that primary exertion of his omnipotence, which, in the original formation of Adam, implanted in his nature the power of re-producing his like, and
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of imparting life and soul to his species, by a fixed and immutable decree, to be continued down from father to son, to the final end and consummation of this sub-lunary world. If the seed of Adam had not been originally endued with the gift of imparting life and spirit to his future generations, how could the souls of his descendants be subjected to original sin? Were any one child descended from the race of Adam, to receive the gift of life and soul from a subsequent exertion of the power of God, it would become a new and distinct act of creation, and the offspring could not possibly be contaminated by the fall, nor be subjected to the miseries and misfortunes resulting from it, as having received its being from an independent cause.

I have, to the best of my ability, endeavoured to illustrate this occult process of nature, by means of the annexed copper-plate engraving, taken from a drawing of the viscera and womb of an unfortunate female, who fainted and died at the time of quickening; the foetus itself being now preserved in spirits. The structure of the gravid uterus is, however, extremely difficult to be shewn, and the more so under these peculiar circumstances. In the wombs of women who die after this period, or at the time of labour, or soon after delivery, fibres running in various directions are observable, more or less circular, that seem to arise from three distinct origins, namely, from the place where the placenta adheres, and from the aperture and orifice of each of the tubes; with all the veins and vessels communicating to and from the placenta and the mother, sur-
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charged with blood; but it is almost impossible to demonstrate regular plans of vessels and fibres, continued any length, without an interruption which involves us in doubt, and destroys that view of the admirable connexion which nature has formed between the vital organs of the mother and child in a state of advanced pregnancy,

From the foregoing observations we may safely conclude, that the mass of blood is the universal medium by which life is propagated, and health preserved, to every class of beings; and that, in its impure or infected state, it is the source from whence the endless number of hereditary diseases derive their origin. Whatever fault impairs the parent blood, fails not to taint the tender habit of its young; whence it has become an established maxim, that, as healthy parents naturally produce healthy children, so diseased parents as naturally produce a diseased offspring. Some of these diseases appear in the earliest infancy; others occur equally at all ages; whilst others lurk unsuspected in the habit to extreme old age, or even to a new generation, slowly impairing the vital organs, and gradually undermining the constitution, before their source, and fatal tendency, can possibly be discovered. There are some diseases indeed, which, though born with us, cannot be said to be derived from the parent, as when a foetus receives some hurt by an injury done to the mother; while others, neither born with us, nor having any foundation in the constitution, are sucked in with the nurse's milk. Let it then be the care of every parent, who
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from some local misfortune is so far compelled to depart from the ties of nature as to abandon her tender offspring to the breast of another, to be satisfied, as far as human foresight and medical penetration can reach, that the constitution and blood of the nurse be free from scrophala, and every other hereditary impurity.

Accidental diseases, though not derived from the parents, nevertheless in general spring from the blood; which, constituting or propagating animal life through every part of the body, is necessarily exposed to every external offending cause, from which impression particular accidental diseases ensue. The climate itself, under which people live, will often produce these affections in the blood; and every particular climate hath more or less a tendency to produce a particular disease, either from its excess of heat or cold, or from the mutability of the weather. An immense number of diseases are also produced in the blood by impure air, or such as is loaded with putrid, marshy, and other noxious, vapours. The same thing likewise happens from high-seasoned or corrupted aliment, whether meat or drink; though even the best and most nutritious aliment will hurt, if taken in too great a quantity; not to mention poisons, which are endowed with such pernicious qualities, that, even when taken in the smallest quantity, they produce the most grievous ferment in the blood, ending perhaps with death itself. There are likewise other accidents and dangers to which mankind are exposed, that ingraft innumerable diseases in the mass of blood; such as the bite of venomous reptiles,

reptiles, or of a mad dog ; an injudicious inoculation or mis-treatment of the small-pox, or measles; the pſora, or itch; the venereal infection; alſo broken limbs, wounds, and contuſions; which, though proceeding from an external cauſe at firſt, fail not to impair the blood, and often terminate in internal diſeaſes and premature death.

Man, however, is not left without defence againſt ſo many and ſuch great dangers. The human body is poſſeſſed of a moſt wonderful power, by which it preſerves itſelf from diſeaſes, keeps off many, and in a very ſhort time cures ſome already begun, while others are by the ſame means more ſlowly brought to a happy concluſion. This power, called the *autocrateia*, or *vis medicatrix nature*, is well known both to phyſicians and philoſophers, by whom it is moſt juſtly celebrated; for this alone is ſufficient for curing many diſeaſes, and and is of ſervice in all. Nay, even the beſt medicines operate only by exciting and properly directing this expulſive force, by which the excrementitious humours from the aliments and blood are expelled, through the proper channels of evacuation, through the excretory ducts, chiefly by means of the *inſenſible perſpiration*, by which power the offending humours from the blood and juices are perpetually flying off. But though phyſicians juſtly put confidence in this power, and though it generally cures diſeaſes of a flighter kind, yet it is not to be thought that thoſe of a more grievous tendency are to be left to the unaffiſted efforts of the ſoſt-ſteps of nature. Phyſicians have therefore a two-fold

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error to avoid, namely, either despising the powers of the *vis medicatrix* too much, which, if left alone, would work a radical and perfect cure; or, putting too great confidence in these exertions of nature, they are left unseconded and alone, till the virulence of infection or disease undermines the constitution, and bears down all before it.

The grand and perpetual means by which the foul and offending humours in the blood and juices are continually carried off, is undoubtedly through the perspirative pores and vessels, which it is highly compatible with sound health to keep open, and for which purpose medicaments are principally used. When this evacuation is copious and gross enough to be discerned by the eye, as in sweat, the perspiration is said to be sensible; but where it is so volatile as to escape the notice of the senses, as is the case in the ordinary state of the body, it is called *insensible perspiration*.---The vessels through which the perspiration is performed lie obliquely open under the squammæ or scales of the cuticle or scarf-skin. They are inconceivably small; from a calculation of Lewenhoeck it appears, that the mouths of one hundred and twenty-five thousand of them may be covered with a common grain of sand. The most considerable of these pores are the orifices of the ducts arising from the miliary glands. Through these vessels there is continually transfusing a subtle humour, from every point of the body, and throughout the whole expanse of the cuticle. The matter evacuated this way is found by certain experience to be more than

than equal to that evacuated all the other ways, i. e. by stool, urine, &c. Sanctorous found in Italy, under the circumstances of a moderate diet, middle age, and easy life, that the matter insensibly perspired was five-eighths of that which was taken in for food: so that there only remained three-eighths for nutrition, and for the excrements of the nose, ears, intestines, bladder, &c.

The same author shews, that as much is evacuated by insensible perspiration in one day as by stool in fourteen days; particularly that, in the space of a night's time, about sixteen ounces are ordinarily discharged by urine, four ounces by stool, and above forty ounces by insensible perspiration. He also observes, that, if a man eat and drink eight pounds in a day, five pounds of it are spent in insensible perspiration; and adds, as to the times, that within five hours after eating there is perspired about one pound; from the fifth to the twelfth hour about three pounds; and from the twelfth to the sixteenth scarcely half a pound. M. Dodart, from a number of experiments made thirty-three years successively, proves that we perspire much more in youth than in age. In some persons the perspiration is so copious, that they void very little of the coarser excrement, though they eat heartily. The benefits of insensible perspiration are so great, that without it animal life could not be preserved. The general cause of perspiration is the circulation and heat of the blood, which enables it to throw off the offending matter. The great subtlety, equability, and plenty, of the mat-

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ter thus perspired, its increase after sleep, &c. constitute the grand symptoms of a perfect state of health; and the chief means of preserving the same. On the contrary, the departing from these is the first sure sign of approaching diseases.

Perspiration is performed, preserved, and increased, by the viscera, vessels, and fibres; by motion or exercise as far as the first appearance of sweat; by a moderate use of venery; by sleep of seven or eight hours, the body well covered, yet not loaded with bed-clothes: cheerfulness; light, fermented, yet solid, food, not fat; pure, not heavy, air, &c. The contraries of all these, as also the increase of the other excretions, diminish, prevent, and deprave, it. Hence we see the cause and effect of this perspirable matter, its use in preserving the parts soft and flexible, and in supplying what is lost, but chiefly in preserving the nervous papillæ moist, fresh, lively, and fit to be affected by objects, and to transmit their impressions. Hence it is, that upon a stoppage of the usual perspiration there arise so many indispositions, particularly fevers, agues, rheums, &c. Too much perspiration occasions weakness, and swoonings; whilst too little, or none at all, occasions the capillary vessels, to dry, wither, and perish. Hence also the larger emunctories come to be obstructed; hence the circulation is disturbed, sharp humours retained; and hence putridity, crudity, fevers, inflammations, and imposthumes. Cold prevents perspiration, by constringing the pores of the skin and thickening the liquors circulating in the cutaneous glands; heat, on the contrary,

contrary, augments it, both by opening the excretory ducts of the glands, and by increasing the fluidity and velocity of the humours. To determine the state and conditions of the perspiration, so necessary for judging of those of the body, Sanctorous invented a weighing chair, whereby he examined the quantity, degree, &c. of perspiration in several circumstances of the body, under several temperatures of the air, and in the several intervals of eating, drinking, sleeping, &c.

Some of the more extraordinary phenomena observed in this speculation, are, that for some time after eating the perspiration is least of all; that between the fifth and twelfth hour after meals perspiration is greatest; that riding either on horseback, in a coach or ship, &c. brisk motion on the ice, &c. but, above all, a brisk friction of the skin, promote perspiration surprisingly; and that perspiration is naturally always much less in women than in men. Perspiration is influenced by the passions of the mind. Thus anger and joy increase, and fear and sadness lessen, both perspiration and urine. Anger causes a strong motion in the membranes of the heart, and quickens its contraction and dilatation, and thereby quickens the contraction and dilatation of the blood-vessels and fecerning ducts, and of consequence increases the discharges of perspiration and urine; and that more or less, in proportion to the strength and continuance of the passion. Joy affects these discharges in like manner as anger. In the passions of fear and sorrow, perspiration and urine are lessened, by the depression of the activity of the soul under those passions.

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The proportion of perspiration to urine is increased by all those exercises which increase the motion of the blood, and warm the skin.

We have an account of a person who, by passing many nights in astronomical speculations, had his perspiration so obstructed by the cold and damp of the air in Holland, that a shirt he had worn for five or six weeks was as clean as if it had been worn but one day. The consequence of this was, that he gathered subcutaneous waters, but was cured in time. The garments best calculated to encourage and promote insensible perspiration, to keep the mouths of the minuter vessels open, and to guard the body from the too sudden and violent effects of cold, are those made of flannel. Whence flannel shirts and waistcoats, or a square piece of flannel worn over the breast or pit of the stomach, particularly in the winter months, are productive of such beneficial effects to weakly and debilitated constitutions, and act as a valuable preservative to the hale and robust. In the annexed copper-plate engraving, I have endeavoured to shew the manner in which the insensible perspiration issues from the pores of the body, which can only be discerned by means of a lens; being of so volatile and subtle a quality, that it passes through our garments with the utmost ease, particularly if woollen; and it even ascends through the bed-clothes like a mist, in the greatest abundance when we are asleep, and the animal functions at rest.

In this manner nature, from all casual obstructions, endeavours to relieve herself; and so long as diseases
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The Insensible Perspiration

Dodd del.

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Peg's sculp

are recent; and of a mild tendency, they are usually carried off by this means, without requiring any aid from medicine. When, however, diseases are of long standing, and the humours in the blood become too foul and viscous to be thrown off by the *vis medicatrix nature*, the whole habit is quickly vitiated, and the circulating mass becomes morbid; yet even in this infected state, the vital heat and activity of the blood strives to purify itself, by determining these morbid particles to the skin, where they form scabs, ulcers, pimples, and other spots, as in the scrophula, leprosy, small-pox, measles, syphilis, &c. or else the virulent matter is directed inwards, where, falling upon the lungs and other viscera, death quickly ensues. Here then we may view the shocking consequences which result from those, who enter into matrimony under a tainted or infected state of the blood. Indeed persons who are afflicted with the leprosy, scrophula, or king's evil, should never marry until a perfect cure has been happily effected, and a pure and healthful state of the blood induced. To enter into wedlock under a venereal taint, is a most unwise, a most cruel, and an ungenerous, act. A man, with only a slight infection, by contact with the woman, will himself, perhaps, experience a perfect cure, in consequence of the foul and infectious matter being drawn from the parts by the female organs, seconded by the action of the rugæ and absorbent vessels on the surface of the vagina. But the unhappy female is sure to take the disorder, and, should she prove with child, she not only carries the poisonous in-

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fection into the marrow of her own bones, but brings an infant offspring into the world, devoted to misery and disease; for whatever foul and infectious humour is implanted in the parent blood, it is immediately carried by the circulation to the vital organs of the child, just as the flame of one candle is by contact communicated to another. Nor can we be surprised at these things, if we only reflect on what has already been adduced, and contemplate the system and œconomy of the human frame. Consider only the powerful effects of a few grains of cantharides, which, if externally applied, act as a burning caustic; but, if taken into the stomach, instantly overturn the natural course of the circulation, by forcing the whole mass of blood into the extremities, but more particularly, and with great vehemence and turgidity, into the private parts; for which reason cantharides are taken with intent to cure the weakness and debility of the penis; but the truth is, that greater debility, and an emaciated constitution, is sure to follow, and not unfrequently instant death.

If, then, so powerful an effect can be wrought on the blood by swallowing a few irritating particles of a small insect, may we not justly infer, that by infusing into the circulating mass, particles congenial to itself, the utmost relief may be afforded to it, even in its most depraved and inactive state? From this consideration alone, we may venture to pronounce, that all disorders originating in the blood, might either be prevented or repelled, were such a medium discovered, by which we might infuse, immediately into the mass, a combination

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of such elemental principles as the blood and juices themselves consist, in their purest and most elastic state ; for this, in fact, is the aim of all medicines ; but which they miss by being administered in their gross form, and being obliged to pass the several digestive operations of the stomach, before they can reach the blood, whereby the principal part of their occult virtue is lost among the food, or secreted in such small quantities as to produce very little effect. But a medium, possessing these congenial principles, ready digested, and so combined as to be taken instantly, and without diminution, into the habit, would not only keep the cruor and the serum in due proportion, which is so essential to health, but would stimulate, correct, purify, and augment, the blood, as its reduced or disordered state might from time to time require. Such a medium, after infinite labour, and unlimited experience, I pronounce the Solar Tincture to be ; and such will be found its operative effects, under whatever circumstances it may be administered, in any climate or season ; the innocent and balsamic qualities of which are as grateful to the internal organs of the human frame, as the solar rays are cheering to the external ; and it affords me no small gratification to avow, that, in offering it to the public, I invade no man's property, nor imitate any medicine at present known in public or private practice.---The experiments I have made with it upon a variety of diseased wretched objects, are innumerable ; and I shall still continue to administer it *gratis*

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to the poor, who are given over by others, or who have not the means of applying for medical assistance.

The infinite variety of complaints an impure or infected state of the blood induces, almost exceeds belief; and hence the new and deceptive forms a scrophulous or scorbutic taint puts on, which often deceive the most eminent of the faculty, and baffle the best intention towards a cure. An impure or scrophulous taint will invade the noblest organs of the human frame, before the patient can be aware of his danger. In the first stage of its visible effects, a weary pain seizes the joints and muscles, attended with a wasting of the legs and loins. In the second stage the gums swell, grow painful, hot, and irritable, and bleed upon the slightest pressure; the roots of the teeth become bare and loose, and the breath nauseous. In the third stage, the gums grow putrid, the teeth black and rotten, the sublingular veins become varicose, and the breath cadaverous; foetid blood distils from the lips, gums, mouth, nose, lungs, stomach, liver, spleen, pancreas, intestines, womb, kidneys, &c. scabs and ulcers break out in all parts of the body, and the joints, bones, and viscera, become morbid. In the fourth stage, putrid, eruptive, and spotted, fevers ensue, which end in an atrophy, or else follow diarrhoeas, dysentery, dropy, consumption, palsy, contractions, melancholy, and all the long and direful train of nervous disorders, which to describe would fill a volume.

To counteract this most virulent of all chronic complaints, the utmost exertions of human skill have been employed.

employed. The remedies prescribed in its different stages are almost innumerable. The object is to reduce the virulence of the infection, and to eradicate its seeds from the blood and lymph; to which end the mildest and most simple medicines are recommended. Mineral and tar waters, for their warm and stimulating quality; milk or whey, from their similitude to the chyle; the cold bath, for bracing the solids and quickening the circulation; antiscorbutic vegetables, &c. for purging and sweetening the blood, such as scurvy-grass, water-creffes, wormwood, hemlock, centaury, vervain, water-trefoil, juniper-berries, the Peruvian bark, saffrafas, guaiacum, aloes, assa-foetida, camomile, diafcardium, saffron, fenna, rhubarb, manna, Æthiop's mineral, hartshorn, native cinnabar, antimony, &c. When these fail, mercury, or a mercurial salivation, is looked upon as the only cure; which, in fact, is but to give the human frame its last vehement shock, and to send the wretched patient in agonies to the grave!

The intention of all these remedies is to impregnate the blood with qualities opposite to those with which it is infected; and this must be done in a superior degree of force and power, before a cure can be completed. But these medicaments are often administered under such nauseous forms, and in so crude and unqualified a state, that they not only torture the patient, but miss entirely their intended aim. The nauseous taste of medicine is nothing but its grosser particles; which, instead of entering the stomach, to irritate and oppress its organs, ought to be drawn off by chemical process;

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for it is the occult virtue of every drug, not its grosser part, that performs the cure. Now the peculiar excellence of the Solar Tincture is, that it combines the essential and occult virtues of all scorbutic vegetables, ready digested, concocted, purified, and resolved into an elegant balsamic essence, pleasing to the taste, and grateful to the stomach. It flies immediately to the heart, whether internally or externally applied, blends and assimilates with the venal and arterial blood, which it generates, corrects, warms, purifies, animates, and impels, through the whole system. It cleanses all the viscera, and glandular parts, particularly the lungs and kidneys; stimulates the fibres, whereby the gastric juice and digestion are promoted; dissolves viscid humours, and expels infection. It exerts very considerable effects on the whole nervous system, sensibly raises the pulse, strengthens the solids, and invigorates the animal spirits. It penetrates into the most intimate parts, opens the mouths of the minuter vessels, restores the natural perspiration, and promotes all the fluid secretions. In every stage of infectious diseases, and in all sudden epidemical disorders, which usually follow from a wet, putrid, and unwholesome, state of the atmosphere, it is an absolute specific; and, as a preventive, an alterative, and purifier of the blood, it has not its equal in the world. It quickly relieves every common malady originating in the blood, such as relaxations, debility, lassitude, tremors, sinking of the spirits, and all those nervous affections which harass and oppress the weak, sedentary, and delicate; and are often
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the consequences of high living and luxuriant indulgencies, without bodily exercise and fresh air. In all these cases, the Solar Tincture is calculated to warm and steady the cold tremulous nerves; to sheath and invigorate the muscular system; to animate the spirits, and renovate the whole man, whereby the chill watery fluids become rich and balsamic, and the circulating mass resumes its healthful state. It is an infallible cure for joint-achs, cramps, spasms, rheumatic-gout, nervous head-ach, agues, and all disorders arising from obstructed perspiration. In complaints of the breast, stomach, and bowels, it gives immediate relief; and, in asthmatic and consumptive cases, is an elegant and expeditious cure. It will stop mortification in very advanced stages, by expelling the poisonous matter; and correcting the juices of the whole body. It requires no argument to convince, more than a single trial; after which, I think, no family who value their health or life will chuse to be without it; particularly under any of the following afflictions:

SCROPHULA, SCURVY, OR KING'S EVIL.

In the first and second stages of this disorder, a small table-spoonful of the Tincture, taken in a wine-glass of cold spring-water night and morning, will prevent the further progress of the disease, and in a very short time restore the blood to its healthful state, the effects of which will be so obvious to the patient, that he will be at no difficulty when to discontinue the medicine. In the third stage, it is often requisite that the medicine
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be internally and externally applied. The mouth should be frequently washed with the Tincture diluted in warm water, and it will very soon expel the poison from the gums. If the viscera be in a morbid state, which may be known by the excrements, or fœæces of expectoration, it will be necessary to take the medicine, night and morning, for several days, in the quantity of a table-spoonful *undiluted*; and, at noon, a table-spoonful in the same quantity of warm water. The scabs, whether dry or moist, should be frequently washed with the Tincture, *undiluted*, which, being absorbed by the minuter vessels, and taken into the habit, will expel the humour, and clear away the scurf. If tumours or foul ulcers occur, wash them frequently with a dilution of the medicine in the same quantity of warm water, until the heat and virulence be abated; then apply the Tincture *undiluted*, with lint or fine rags, by which means the infectious matter will be totally eradicated, the blood and juices purified, and the ulcers healed.

In the fourth stage, whatever may chance to be the sad malady to which the disorder ultimately turns, a strict attention to regimen, exercise, and fresh air, as far as the strength and condition of the patient will admit, must be particularly attended to. And, in all these cases, the best and most simple methods of treatment are laid down in the Medical Part of my Family Physician, page 168, &c. to which I beg leave to refer every patient in this dreadful stage of the disease; and, in aid of the advice there given, let the Solar Tinc-
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ture be regularly persisted in every night and morning, in the quantity of one table-spoonful in as much warm-water; and, at twelve o'clock at noon, take a table-spoonful *undiluted*.---Let this be continued eight or ten days; then take a table-spoonful diluted in warm-water three times a day, morning, noon, and night, till the nerves and organs begin to resume their healthful tone; then let the doses be gradually abated to a spoonful in water every other morning, which should be continued till health is perfectly re-established; and which, by God's blessing, will generally happen, even in these desperate cases, in the course of a month or six weeks.---As a preventive of all foul or scrophulous taints in the habit, and as an alterative, and purifier of the blood, it may be occasionally taken every other morning for a week together, particularly in the spring and fall, in the quantity of a table-spoonful in a wine-glass of cold spring-water; or it may be occasionally taken as a beverage after dinner or supper, mixed in a tumbler with warm water, and made palatable with sugar. It will be found pleasant to the taste, and grateful to the stomach, superior to any spirits, or punch. The many instances of elegant and uncommon cures effected by the Solar Tincture, on persons of the first eminence, may be inspected at any time, on application at my house. But, at the particular request of the parties, I have here added the following remarkable

C A S E.

Mr. R. Pinder, of Bramstone, near Bridlington, in Yorkshire, had been long afflicted with a violent scorbutic

butic humour in his blood, which threw out sometimes dry, and sometimes moist, scabs and tumours on the skin. Being neglected, it at length pervaded the whole system, till, turning inwardly, it fell upon his lungs, and reduced him to the last stage of a consumption. In this deplorable state, given over by the faculty, left totally emaciated, and incapable of turning in his bed, he fortunately had recourse to the Solar Tincture. The first dose was given *undiluted*, which threw him into a fine perspiration, and composed him to sleep, which had long been a stranger to his eyes. After one large bottle had been administered agreeable to the bill of directions, at the end of a week he was so much restored, that with very little assistance he was enabled to put on his own clothes; and, after continuing the medicine for little more than a month, he was able to walk abroad. And now, after having continued the Tincture night and morning, and occasionally using it as a beverage made similar to warm brandy and water, he has quite recovered his former health and strength; being, to the surprise of every body who beheld him in his late emaciated condition, as robust and hearty as it is well possible for a man to be.

DEBILITATED, TAINTED, AND ENFEEBLED, CONSTITUTIONS.

Muscular debility was a misfortune but little known to our forefathers. Whether immured in venereal embraces, or sacrificing at the shrine of Bacchus, moderation and seasonable hours directed the measure of their

their enjoyment. If revelry or voluptuousness by chance unstrung their nerves, gymnastic exercises and field sports, or the more pleasurable delights of the chase, quickly restored them to their proper tone,---gave new vigour to the blood,---health to the cheek,---and lighted up afresh the flame of love. But now, how strange is the reverse. Habituated to effeminacy, and fed with dainties,---revelling all night with wine, and stretched on beds of down all day,---shut up in stews and brothels, scarcely breathing wholesome air,---clasped in the arms of tainted or diseased females, until enjoyment palls upon the senses, and the muscular powers absolutely refuse their office, no wonder so many men are found old in every thing but years; whose constitutions are fairly worn down, blood stagnant, solids relaxed, secretions diverted from their proper course, muscles debilitated, eyes sunk, palid cheek, and spirits gone. These are not half the evils resulting from this fashionable source of destructive folly. It may not be amiss, however, to describe the remarkable cases of a few, of whom the Solar Tincture has made perfect cures, by infusing a new portion of health into the mass of blood; sincerely hoping, that a more wise and manly course of life will shortly eradicate these disgraceful complaints, and restore to the ladies a genuine race of Englishmen and Britons.

C A S E S.

PREMATURE DEBILITY.---A gentleman in the army, under thirty years of age, complained to me that he had all at once *become incapable of enjoying his*
S *wife.*

wife. Suspecting he was not married, I desired him to be open and candid, to relate to me his *real* situation, and not a *pretended* one, which was only to impose on his own understanding. He thanked me for the rebuke---said he would be frank, and in a few words declared, That from excessive lust, and continual debauch, he had lost his virility; and, to add to the misfortune, he was really on the eve of entering into the marriage state. In other respects he felt no diminution in his health or constitution; and from external appearances, this was surely the last imperfection that could have been suspected. His complexion was vigorous and lively, his flesh firm, and conformation excellent; yet, notwithstanding this, he was impotent to such a degree; that neither the strength of his own desires, nor the excitations of the female, could affect the part. It often happens, that though the organs remain sound, yet if the nervous and seminal fluids have degenerated from a healthful state---if they are impoverished by being too much drained, or turned into an unnatural course, they cannot then perform their office, by reason that their moving powers, and stimulus on the blood, are become too weak to direct their force and action in the manner nature requires in the act of copulation. I therefore enjoined him to abstain entirely from all attempts of the kind, for three months at least; directed the ointment as in page 240 of the Medical Part of my Family Physician, with the Solar Tincture three times a day for two months; then twice a day, until he found it no longer necessary. After taking

taking six large bottles, he generously thanked me for a more hale and robust state of body than he ever remembered to have enjoyed before. He has since sent me several patients, in almost as debilitated a state as he was himself, who are now ready to unite with him in giving full testimony to the renovating powers and peculiar efficacy of the Solar Tincture.

A RELAXED HABIT.

Little more than three months ago, a gentleman, about fifty years of age, lately returned from the East-Indies, applied to me for the cure of what he termed a *broken constitution*. He had made very free with the fable beauties of Bengal---had undergone a mercurial salivation, and appeared to be sinking under an universal languor and debility of the whole muscular system. The sphincter of the bladder was so weakened, that the urinary secretion came from him by drops, in so perpetual and involuntary a manner, as not to be perceived until the moisture of one set of cloths became so sensibly afflicting, as made it necessary to supply fresh ones, which usually happened every hour. The corporeal functions were dissipated and relaxed, the tone of the stomach and viscera was nearly gone, the tremulous nerves reluctantly performed their office, and the circulation was become stagnant and morbid. I advised an immediate recourse to the most nourishing food, with strong port-wine negus for his drink; and the Solar Tincture to be taken four times a day for the first month; three times a day for the second month;

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and

and once or twice a day afterwards, as occasion might seem to render necessary. Before the expiration of twenty days, the sphincter muscle acquired its proper tone, the pulse became strong and regular, and the nervous tremors were considerably abated. By the end of the second month, a renovation of the whole animal œconomy seemed to have taken place, and a visible accumulation of blood and juices had retrieved the circulation. Before the expiration of three months, I had the gratification to see this patient completely restored to such a state of bodily health and strength, as utterly astonished himself, after taking only eight large bottles of the Solar Tincture.

HYPOCHONDRIACAL DEBILITY, OR WEAK NERVES.

A gentleman in Oxfordshire lately came to town on purpose to consult me in this complaint. He appeared to be near thirty years of age, of middling stature, but of a weakly constitution. He had for upwards of seven years past paid his addresses to a lady, whom he had long promised, and very much desired, to marry; but whenever he proposed in his mind to fix the day, or whenever it happened that he attempted to salute or embrace her, he was seized with an unaccountable tremor of the whole body, his spirits sunk, his virility left him, and a violent palpitation of the heart ensued. In short, he was so distrustful of his own powers, that he confessed it was the fear of not being able to perform the rites of the marriage-bed that had been the only and the sole cause of thus protracting his wedding-day.

day. This is certainly a most singular instance of the hypochondriacal affection, and of its derangement of the nervous system. The debility induced by it seems to arise from the weaker energy of the brain, the fault of which however, cannot be detected by the nicest anatomist. For this reason, we do not well know how such defect should be restored; but as nature, seemingly for this purpose, excites the motion of the heart and arteries, we must ascribe the continuance of such debility to the too weak re-action of the sanguiferous system. The heart will generally palpitate from a violent excitement of the nerves, especially when the blood is endowed with too small a share of stimulus. Hence palpitation from any affection of the mind, and from hysterics in women. Under whatever circumstances this hypochondriacal affection happens, it debilitates the whole animal machine, and renders the person unable to perform the proper offices of life. The prostration of spirits, weakness, and languor, are often surprisingly great, though the pulse seems tolerably strong, as being heightened by animal desire. The effect, however, is sure to produce a languid circulation, the blood seeming to adhere, with uncommon energy, about the region of the heart. I suspect it is in these cases that cantharides are most frequently used. The patient acknowledged, after some hesitation, that he had tried them; but they only produced an involuntary though violent erection, by no means adapted to the cure, nor to the purpose he intended. Hence this remedy is not only inadequate, but extremely dangerous;
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for it too much exhausts the vital powers, and is followed by a vast dejection of spirits, tremors, startings of the tendons, &c. which bring on rigours, cold clammy sweats, syncope, and premature death.

The means, therefore, which nature points out for the cure of this species of debility, are directed to support and increase the action of the blood through the heart and arteries; and the remedies to be employed are tonics and stimulants. Of all the stimulants, which in this constitutional defect may be advantageously employed, port-wine seems to be the most eligible. It has the advantage of being grateful to the palate and stomach, and of having its stimulant parts so much diluted, that it can be conveniently given at all times and seasons, and may be employed with sufficient caution; but it is of little service unless taken pretty largely.--- It may be suspected that wine has an operation analogous to that of opium; and on good grounds. But we can distinctly mark its stimulant power only; which renders its effects in the phrenitic delirium manifestly hurtful; but in cases of debility as remarkably useful. - -Hence I directed the Solar Tincture to be taken morning, noon, and night, in strong doses, for the first month; once a day, or oftener, at the discretion of the patient, until the end of the third month; but to drink every day after dinner, a pint of generous port; and to inform me at intervals the change he might find in his constitution. He took with him a dozen large bottles of the Solar Tincture, and before a month elapsed, I had the pleasure of receiving an epistle of
unfeigned

unfeigned thanks. He found himself so much restored by the course I laid him under, that, before the expiration of the three months, he married the lady; and I have no doubt will very shortly have issue.---I have been somewhat more elaborate in describing the particulars of this case, having reason to believe it is not an uncommon malady, and would therefore wish to enable every patient to become as much as possible a judge of his own infirmity.

NOCTURNAL EMISSIONS, OR INCONTINENCE OF
THE SEMEN.

A young man of robust make, and in the prime of life, being under twenty-six years of age, applied to me for relief in the above unfortunate complaint. It appeared, that, from the time of puberty, he had found a weakness in the part, and an occasional discharge of the seed, upon the slightest irritation. As he grew up to greater maturity, the malady increased upon him. Upon every attempt to have contact with a female, the semen passed involuntarily from him, before even a complete erection could take place, whereby his purpose was continually defeated. This defect grew upon him, until the bare sight or thought of any thing which tended to excite venereal desires brought away the seed; yet it had no affinity whatever to a gleet, because the emission never occurred but either in the attempt, or in the desire, of copulation; or under the influence of lascivious dreams. In proportion as this weakness grew upon him, his desire of familiarity

rity with the sex became the stronger ; and, I am inclined to think, was the principal reason of the encrease of the malady, and of the nocturnal emissions, which happened more or less every time he went to sleep. This incessant discharge had reduced him to a meagre visage, fallow complexion, hollow eyes, depression of spirits, and slow-fever ; and a galloping consumption would soon have followed. I directed the Solar Tincture every morning at sun-rising, at mid-day, and at six o'clock in the afternoon, in the quantity of a wine-glass full, with one third warm-water ; and every night at going to bed, twenty drops of liquid laudanum, for the purpose of making his sleep too strong to be affected by the influence of dreams. This course, assisted by a strengthening regimen of calf's-foot jelly, veal-broth, and strong port-wine negus, had very quickly the desired effect. His sleep was perfectly sound and calm, and, after the third night, he could not recollect the return of any nocturnal emission. The strengthening ointment, directed in page 240 of my Family Physician, was used every other morning ; and, within the space of only two months, the seminal vessels were completely braced up, and the disorder so totally removed, as not to leave a single symptom of his former weakness.

O N A N I S M.

A youth, apparently under age, applied to me for the cure of a disorder, which, he said, had deprived him of the power of erection, and of all sensation in the

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privities. In so young a subject, I could not suppose this want of tone to arise from a general debility of the nervous system, particularly as no other symptoms warranted the conclusion. I had a strong suspicion it was the effect of Onanism, or secret venery, which usually ends in this species of absolute impotency; but this he denied. He told me he had some time ago contracted the foul distemper, and through shame, and the dread of its coming to the knowledge of his parents, he had neglected to disclose his misfortune to any person, until the present malady was brought on. Of the foul distemper, however, I could find no other symptom than a simple gleet; and, upon putting the necessary questions, not a single reply corresponded with the usual effects of that disorder. After half an hour's close examination, I brought him to confess what I above suspected, that he had so much addicted himself to this shameful and destructive vice, that the seminal vessels were completely relaxed; the erecories, the nerves, and glans, of the penis, had entirely lost their tone; an involuntary discharge of the semen, without irritation, or turgidity of the parts, had long taken place, and brought on a want of appetite, an impoverished state of the blood, and an universal lassitude of the body. The lecture I gave him upon this occasion, will never, I trust, be effaced from his memory; and he has since faithfully promised that it shall not. I directed the strengthening electuary and ointment, in page 239 and 240 of my Family Physician, to be used as therein prescribed, then to take,

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four times a day, a table-spoonful of the Solar Tincture in an equal quantity of warm water, for a month at least; then three times a day for the second month, and twice a day, in cold spring-water, for the two months following; which gradually coiled up the debilitated parts, gave elasticity to the blood, retrieved the sensation of the glans, and the sympathetic office of the erectories, braced the nerves, ligaments, and tendons, and gave that due tone and energy to the muscular system, which in less than four months restored the patient to perfect health and vigour.

AN IMPURE OR TAINTED HABIT.

This malady, so common among our dissipated youth, generally arises from a venereal complaint badly cured. Indeed the scrophula, the king's evil, the leprosy, and other foul humours, when too long suffered to prey upon the blood, will naturally induce this consequence; yet ninety-nine cases out of every hundred, are found to result from the improper use of mercury, either taken too abundantly into the stomach, or too often applied externally, in the venereal disease. A gentleman in the militia very lately came to me under this misfortune, who had absolutely worn down the organs of his stomach by taking medicines for its cure, without obtaining the smallest relief. He was no sooner warm in bed, than deep-seated nocturnal pains attacked his arms, thighs, and head, which many of the faculty mistook for rheumatism. The membranes, muscles, and ligaments of the joints, were scarcely ever
free

free from pain ; whilst carious ulcers occasionally broke out upon the ulna, tibia, and bones of the cranium. These symptoms had also deceived several of the faculty, who, taking his complaint to be a confirmed lues, still added to the malady, by loading him with fresh doses of mercury. The truth is, that this disorder was by no means of a venereal nature, but was rather the consequence of the remedy than of the disease, since it arose entirely from the long and repeated doses of mercury his body had sustained, and which was grounded in his habit by salivation. The mercury had insinuated itself into the marrow of his bones, had vitiated every fluid secretion, and tainted the very air he breathed. Under such circumstances I will allow, it is very difficult, if not almost impossible, for a physician, upon a superficial inspection, absolutely to decide, whether the original disease hath been altogether overcome ; yet surely he ought attentively to distinguish and consider the several symptoms apart ; and then, by comparing them with each other, a clear judgment may be formed upon the general review. Finding, by this method, the real state of the patient's case, I ordered him a nourishing diet, gentle exercise, and an absolute denial of the smallest intercourse with woman. To this he readily submitted, putting himself under a regular course of the Solar Tincture, which he took three times a day, in the quantity of a wine-glass three parts full, filled up with warm water, for the first month. At the expiration of this time he paid me a visit, when his company was infinitely *more agreeable*, because the

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pleasing aspect of health had superseded the nauseous effluvia of his disease. I now only enjoined him to follow the same regimen and *abstemious* mode of living for a month or two longer, taking the Tincture diluted in a glass of cold spring-water once or twice a day, as he might find himself inclined. This he rigidly attended to; and I have now the pleasure to declare, that only nine large bottles of the Solar Tincture have restored this gentleman from the most dangerous and deplorable state of a tainted and corrupted habit, to sound health, and a renovated state of the blood and juices.

A TAINTED HABIT IN A STATE OF PREGNANCY.

This is the most shocking case my practice or experience ever produced. The patient was taken in labour, and in the act of parturition the child presented its right arm, which separated from the body while the operator was returning it into the womb. The life of the mother being despaired of, I was sent for; when, on inspection, I quickly perceived conception had taken place under an infected state of one of the parents. I performed the residue of the operation myself, and brought away the fœtus without a farther separation of the joints, but with great difficulty, since it was ulcerated and half rotten with disease. By a most tender and judicious treatment of the woman, assisted by the Lunar Tincture, her life was preserved; and in the space of five weeks she appeared to have regained her health and strength; when, to the astonishment of every

every one, she fell into a violent salivation. Being sent for upon this singular occasion, I thought it right to interrogate the husband ; when, after a vast deal of hesitation and dissembling, he confessed having had connection with his wife under a venereal infection; and with a view to prevent the consequences, he had prevailed on her to swallow strong doses of mercury, which I have reason to suppose lay dormant in the body until after her delivery ; when the efforts of nature being no longer directed to the preservation of the child, suffered the mercury to attack the salival glands, and to produce the effect we have just described. I ordered her a spare but nourishing diet ; worked off the mercury in the customary way, and then began a course of the Solar Tincture. A table-spoonful, in an equal quantity of warm water, was taken four times a day for the first week ; then three times a day until the end of the month ; afterwards twice a day in cold spring-water for a month longer ; and then once or twice a day, or every other day, as the patient found convenient ; by this means she happily experienced a complete cure in less than three months, and now enjoys a perfect state of health, desirous of certifying the fact to any unfortunate female, who, under similar circumstances, wishes to call upon me for that purpose. Indeed every woman, who has the misfortune to suspect even the smallest taint of a similar nature to be lurking in her blood, should put herself under a course of the Solar Tincture, and persist in it every night and morning, in the quantity of a table-spoonful diluted in a wine-

wine-glafs of cold ſpring-water, during the whole nine months ſtate of pregnancy.

The above caſe brings to my recollection a very ſingular inſtance of an accidental ſalivation, brought upon a young lady by a foreign ſubſtance irritating one of the parotid glands; the particulars of which I ſhall here inſert for the ſake of thoſe who may happen to be under ſimilar circumſtances.---In the month of April, 1751, a young lady about the age of ſixteen years, of a delicate habit, but ſubject to no particular complaints, perceived the beginning of a diſeaſe which afterwards proved moſt obſtinate and loathſome, viz. an inceſſant ſpitting. The quantity of this diſcharge was different at different times, varying from one pint to two pints and a half in twenty-four hours. As to its quality, it ſeemed to be no other than the ordinary ſecretion of the ſalival glands. By ſo large and conſtant an evacuation, her ſtrength became extremely impaired, and the moſt efficacious medicines had proved uſeleſs. She had taken large quantities of the Peruvian bark, both alone and combined with preparations of iron: and afterwards the fetid gums, opium, amber, alum, and the Neville-Holt-water, had in ſucceſſion been given her. In the mean time an exact regimen had been preſcribed: ſhe had been ordered to ride conſtantly; and to confine herſelf to a mucilaginous diet, ſuch as veal, calves' feet, &c. Likewise a gently-opening medicine had now and then been interpoſed. The diſeaſe ſtill continued unaltered; ſhe had afterwards tried the *tinctura ſaturnina*; and had, at the ſame

same time, been encouraged to chew the Peruvian bark, and to swallow the saliva. But all these attempts had been vain ; and after she had taken some or other of the medicines above mentioned until the end of September, 1753, namely, above two years, it appeared to her physician, Sir George Baker, unreasonable to expect relief in such a case from any internal medicines whatever. He now conceived a suspicion, that some extraneous body, having accidentally found its way into the *meatus auditorius*, might possibly be the cause of this extraordinary secretion, by keeping up a continued irritation in the parotid glands. With this view he examined her ears, and extracted from them a quantity of fetid wool. How, or when, it came thither, no account could be given. To this substance he attributed the beginning of the salivation, notwithstanding that the disease did not immediately abate on the removal of the wool ; as it appeared to be no improbable supposition that the discharge might be continued by the force of habit, though the original cause no longer remained. It seemed therefore expedient to introduce some other habit, in the place of the increased secretion of saliva ; which habit might afterwards be gradually left off. With this intention, he prevailed on the patient to chew perpetually a little dry bread, and to swallow it with her spittle. In a few weeks, it became necessary for her to chew the bread only at certain hours in the day ; and thus, after two months, she became entirely free from a most disgusting and tedious disorder.---It is worthy of observation, that, at first,

the swallowing of so much saliva frequently occasioned a nausea; and that then, for a few hours, she was obliged to spit it out as usual; and that, during the greatest part of the time when she chewed the bread, she had a stool or two every day more than common.

TABES DORSALIS, OR CONSUMPTION OF THE BACK.

A young gentleman, twenty-two years of age, applied to me in the above disorder, which had worn him down to a mere skeleton. The tabes is seldom distinguished by any remarkable fever, cough, or difficulty of breathing; but is attended with want of appetite, a weak digestion, and a morbid state of the blood, whence the body grows languid, and wastes by degrees. Sometimes this species of consumption is brought on by a venereal ulcer; but it most commonly proceeds from excessive evacuations of the semen, which was the case with this patient. He had too early addicted himself to an intercourse with lewd women, which eventually brought on an involuntary shedding of the seed, which came from him on the least exertion, whether of walking, riding, lifting a weight, or even of pulling off his clothes.---I ordered him a strong nutritious diet, with a table-spoonful of the Solar Tincture four times a day, in the same quantity of warm water, which he pursued for a month. He found his strength was so much recovered, that I could safely advise moderate exercise both on horseback and on foot. The gleet, however, was uncommonly obstinate, and the Tincture was continued for the second month

month in the same quantity. By this time the parts were considerably braced; he could run or jump without perceiving the smallest emission; and the healthful colour of his cheek began to return.---He now persisted in the Tincture, only three times a day, for a month longer; after which the dose was reduced to night and morning for another month; he then took it twice a day for two months more, at the end of which period every symptom of the complaint was removed, he had fully recovered his flesh and strength, and now preserves it by taking the Solar Tincture as a beverage, made after the manner of brandy and water. This disorder has in general been deemed incurable. It is true, that, even in its early attacks, it is so essentially necessary to abstain from venereal embraces, that without it, the best remedies will prove altogether useless; hence the *Tabes Dorsalis* so often proves mortal, because the patient has seldom resolution enough to dispense with his amours.

RHEUMATIC GOUT.

This disease is generally brought on by alternate heats and colds in the blood, whereby a humour is produced which attacks the joints and muscles, sometimes accompanied with discolourations and swellings, and at other times without either; but it is always attended with excruciating pain. Mr. John Brandham, of Bridlington Quay, was attacked in this manner; when, after some time, the severe pain of his joints, falling into his legs and thighs, deprived him of the

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use of his limbs, and confined him entirely to his bed. He was soon after seized with a violent pain in his head and stomach, which so much affected his respiration, that instant death was expected. In this extremity, half a wine-glass of the Solar Tincture was administered, *undiluted*, which removed the danger, and gave his stomach immediate ease. A table-spoonful, in the same quantity of warm water, was then given every third hour, during the succeeding day and night, by which the pains were considerably abated. He continued the medicine four times a day for a month longer; at the expiration of which time he experienced a perfect cure, and has never since found the smallest return of his complaint; of which he is desirous of satisfying any enquirer, who chuses to apply for that purpose.

**AGUES, CONVULSIONS, CHOLIC, BLOODY-FLUX,
AND VIOLENT SPASMS IN THE STOMACH AND
BOWELS.**

During the fit, let one or two table-spoonfuls of the Solar Tincture, *undiluted*, be administered successively, as the extremity of the case may require; and afterwards let the patient continue the medicine, night and morning, in the quantity of a table-spoonful in a wine-glass of warm water, or oftener, as the obstinacy of the case may render necessary, and in a very short time a perfect cure will be experienced; a few instances of which I shall add, in the words of those who have transmitted me the facts.

To

TO E. SIBLY, M. D.

SIR,---A few nights ago, I was attacked in bed with a violent pain in my stomach and bowels, which alternately produced such a succession of convulsive spasms and cold chills, that I really thought I was seized for death. Fortunately a bottle of your Solar Tincture was in the house, purchased the day before by my son, of which my servant gave me a table-spoonful and a half, unmixed with water. The instant effect it had on my stomach I could only compare to electricity; for, to the astonishment of all about me, the spasms instantly ceased, a gentle perspiration came on, in which state I fell asleep, and did not awake till the morning, when I found myself entirely free from pain. On getting up, I took a spoonful more of the Tincture, in an equal quantity of warm water, and have not since experienced the smallest return of the disorder. Requesting you will make this known, for the benefit of others, I remain, with grateful esteem, &c.

No. 25, Philpot-lane, M. ARMSTRONG.
Fenchurch-street, Feb. 12, 1794.

TO E. SIBLY, M. D.

SIR,---In gratitude, I cannot but thank you for that excellent medicine, the Solar Tincture. It has saved my life. I was suddenly seized with a violent cholic, which brought on a mortification of the bowels. The efforts of the faculty were tried in vain, and I was given over. In these moments of extremity, my existence was preserved by only two spoonfuls of your

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medicine, *undiluted*, which instantly relieved me from the rack of torture. After two more doses, the obstruction was removed by natural evacuation, and a few hours restored me to my usual state of good health. I entreat you to publish this for the public good, and shall be ever gratefully your's,

Clifton, near Bristol,

JOHN POWELL.

March 24, 1794.

TO E. SIBLY, M.D.

SIR,---Actuated by a principle of gratitude, I cannot omit acquainting you of an extraordinary cure performed on me by means of your Solar Tincture. ---I had for some time been afflicted with the dysentery or bloody flux, and was reduced to a very weak and languid state, without deriving any benefit from the prescriptions of the faculty. This induced me to make trial of your Solar Tincture; when, after taking only two small bottles, I found myself perfectly recovered; therefore, by publishing this to the world, you will confer a favour on your grateful, &c.

No. 8, Windmill-street,

WILLIAM JACKSON.

Tottenham-court Road, May 15, 1794.

DISEASES OF THE BREAST AND LUNGS, ASTHMA, DROPSY, OR CONSUMPTION.

Take one spoonful of the Tincture, night and morning, for twenty days successively, diluted in two spoonfuls of cold spring-water; then reduce it to the same dose every other day, which will in general remove

move the malady in the course of a month; but, if the dropfy or consumption have been far advanced, it will be necessary to continue the medicine for one, two, or even three, months longer, reducing the number of doses in proportion as health and strength appear to return, and as the blood shall have resumed its proper consistency, and a brisker circulation. In these complaints, it will not be amiss to take the Tincture in a tumbler of warm water, as a beverage, for some time after the cure is perfected, as it will infallibly prevent the blood from returning to its watery and impoverished state, and will rarefy and expel the viscid cohesions in the pulmonary vessels. In these disorders, the Solar Tincture may be safely administered to females even during obstructions of the catamenia, as hath lately been experienced by perfecting an admirable cure on a lady in Grafton-street, Tottenham-court Road.

This lady was afflicted with obstructions of the liver and spleen, insomuch that she could not walk up one pair of stairs without much pain, and shortness of breath. Her menses were obstructed; and twice or thrice a day she was attacked with asthmatic spasms, accompanied with febrile symptoms. This affliction being of a peculiar nature, I was obliged to prescribe both the Solar and Lunar Tinctures, in the following manner. Whenever the fever came on, she took a dose of the Solar Tincture; and, every morning and evening, sixty drops of the Lunar Tincture in a gill of mugwort-tea; and in twenty-one days she was perfectly

fectly recovered, and restored to her usual colour and vivacity, to the great joy of her parents and friends.

MENTAL DEPRESSION, OR LOWNESS OF SPIRITS.

This may be considered the primary disorder of the nervous train; and, if resisted in time, may in most cases be easily cured. For this purpose take a table-spoonful of the Solar Tincture, diluted in a wine-glass of cold spring-water, every forenoon at eleven or twelve o'clock, for fourteen successive days; then use it every two or three days for a month; and the complaint will be entirely removed, as all patients will sensibly feel, by their alertness, activity, and unusual flow of natural spirits; of which the following case may serve as an example:

TO E. SIBLY, M.D.

SIR,---From a full conviction of the efficacy of your Solar Tincture, I cheerfully come forward to inform you, that having been much afflicted with depression of spirits, a nervous tremor, and palpitation of the heart, (owing, I believe, to close application to study, and much professional duty,) I have lately experienced a perfect cure, by taking one large bottle of your medicine. Impressed, therefore, with a sense of gratitude to God and you, and having a certain knowledge of many other cures performed by your Tincture, I do hereby request this may be made public for the benefit of the afflicted, and am with esteem, &c.

Borough, Southwark,

W. WOOLLEY, M.A.

May 10, 1794.

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BILE ON THE STOMACH.

All bilious complaints are removed by the Solar Tincture in a most extraordinary manner. Whenever a fit appears to be coming on, with the stomach loaded and oppressed, one large table-spoonful, taken in the same quantity of warm water, will in ten minutes carry off the offending matter, cleanse and comfort the digestive organs, and give the patient immediate relief.

BITE OF A MAD DOG, OR ANY VENOMOUS REPTILE.

The fatal disease consequent on the bite of a mad dog, is the hydrophobia, or *dread of water*; which circumstance first suggested dipping in the sea for the cure, by antipathy. It is very remarkable that these patients have not only a dread of water, but of every thing bright or transparent. Soon after this affection takes place, the mind becomes impaired; which shews that the poison is carried through the blood to the nervous fluid, and thence to the brain. Dr. James, in his Treatise on Canine Madness, mentions a boy sent out to fill two bottles with water, who was so terrified by the noise of the liquid running into them, that he fled into the house crying out that he was bewitched. He mentions also the case of a farmer, who, going to draw some ale from a cask, was terrified to such a degree at its running into the vessel, that he ran out in great haste with the spigot in his hand. But, in whatever manner this symptom comes on, it is certain that the most painful sensations accompany every attempt to swallow liquids.

quids. Nay, the bare sight of water, of a looking-glass, or any thing clear or pellucid, will give the utmost uneasiness, and even throw the patient into convulsions. In this disease there seems to be an extreme sensibility and irritability of the nervous system. The eyes cannot bear the light, or the sight of any thing white; the least touch or motion offends them, and they want to be kept as quiet and in as dark a place as possible. Some complain of the coldness of the air, frequently when it is really warm. Others complain of violent heat; and have a great desire for cold air, which yet never fails to increase the symptoms. In all there is a great flow of the saliva into the mouth; which is exceedingly troublesome to the patients, as it has the same effect upon their fauces that other liquids have. This therefore they perpetually blow off with violence, which in a patient of Dr. Fothergill's occasioned a noise not unlike the hollow barking of a dog, and which he conjectures might have given rise to the common notion that hydrophobic patients bark like dogs. They have an insatiable thirst; but are unable to get down any drink, except with the utmost difficulty; though sometimes they can swallow bread soaked in liquids, slices of oranges, or other fruits. There is a pain under the *scrobiculus cordis*, as in the tetanus; and the patients mournfully point to that place as the seat of the disease. Dr. Vaughan is of opinion that it is this pain, rather than any difficulty in swallowing, which distresses the patient on every attempt to drink. The voice is commonly plaintive and mournful; but

Dr.

Dr. Vaughan tells us there is a mixture of fierceness and timidity in the countenance which he cannot describe, but by which he could know a hydrophobious person without asking any questions. Some seem to have at times a furious delirium, and an inclination to spit at or bite the by-standers; while others shew no such inclination, but will even suffer people to wipe the inside of their mouths with the corner of a handkerchief in order to clear away the viscid saliva which is ready to suffocate them. In some male patients there is an involuntary erection of the penis, and emission of the semen; and the urine is forced away by the frequent return of the spasms. In a letter from Dr. Wolf, of Warfaw, to Henry Baker, F. R. S. dated Warfaw, September 26, 1767, we have the following melancholy account of the cases of five persons who died of the hydrophobia:---None of them quite lost their senses; but they were all talking without intermission, praying, lamenting, despairing, cursing, fighting, spitting a frothy saliva, screeching, sometimes belching, and retching, but rarely vomiting. Every member is convulsed by fits, but most violently from the navel up to the breast and œsophagus. The fit comes on every quarter of an hour; the fauces are not red, nor the tongue dry. The pulse is not at all feverish; and when the fit is over nearly like a sound pulse. The face grows pale, then brown, and during the fit almost black; the lips livid; the head is drowsy, and the ears tingling; the urine limpid. At last they grow weary; the fits are less violent, and cease towards the

X

end;

end; the pulse becomes weak, intermittent, and not very quick; they sweat, and at last the whole body becomes cold. They compose themselves quietly as if to get sleep, and so they expire. A general observation was, that the lint and dressings of the wounds, even when dry, were always black, and that when the pus was very good in colour and appearance. In one of Dr. Wolf's patients who recovered, the blood stank intolerably as it was drawn from a vein; and one of Dr. Vaughan's patients complained of an intolerable foetid smell proceeding from the wounded part, though nobody but himself could perceive it. In general, the violent convulsions cease a short time before death; and even the hydrophobia goes off, so that the patients can drink freely. But this does not always happen; for Dr. Vaughan mentions the case of a patient, in whom, "when he had in appearance ceased to breathe, the spasmus cynicus was observable, with an odd convulsive motion in the muscles of the face; and the strange contrariety which took place in the action of these produced the most horrid assemblage of features that can well be conceived. Of this patient also it was remarkable, that in the last hours of his life he ceased to call for drink, which had been his constant request; but was perpetually asking for something to eat."

The hydrophobia seems to be a symptom peculiar to the human race; for the mad animals which communicate the infection do not seem to have any dread of water. Notwithstanding this, dipping is the common

mon remedy for the cure of dogs and men. With regard to the symptoms of madness in dogs, they are very equivocal; and those particularly enumerated by some authors, are only such as might be expected in dogs much heated or agitated by being violently pursued and struck. One symptom indeed, if it could be depended upon, would determine the matter; namely, that all other dogs avoid and run away from one that is mad; and even large dogs will not attack one of the smallest size who is infected with this disease. Upon this supposition they point out a method of discovering whether a dog that hath been killed was really mad or not; namely, by rubbing a piece of meat along the inside of his mouth, and then offering it to a sound dog. If the latter eats it, it is a sign the dog was not mad; but, if the other rejects it with a kind of howling noise, it is certain that he was. Dr. James tells us, that among dogs the disease is infectious by staying in the same place; and that after a kennel has been once infected, the dogs put into it will be for a considerable time afterwards in danger of going mad also. A remedy for this, he says is, to keep geese for some time in the kennel. He rejects as false the opinion that dogs when going mad will not bark; though he owns that there is a very considerable change in their bark, which becomes hoarse and hollow.

With regard to the immediate cause among mankind, there is not the least doubt that the hydrophobia is occasioned by the saliva of the mad animal being mixed with the blood. It does not appear that this

can operate through the cuticula; but, when that is rubbed off, the smallest quantity is sufficient to communicate the disease, and a slight scratch with the teeth of a mad animal has been found as pernicious as a large wound. It is certain also, that the infection has been communicated by the bites of dogs, cats, wolves, foxes, weasels, swine, and even cocks and hens, when in a state of madness. But it does not appear that the distemper is communicable from one hydrophobious person to another, by means of the bite, or any other way.

It has been generally allowed by practitioners, that, though the hydrophobia may be prevented, yet it can seldom be cured after it has made its appearance. The most essential part of the treatment therefore depends on an immediate use of the proper means of prevention. For this purpose some advise the instant cutting out the part bitten, which must certainly be an effectual mode, provided we could be sure the poison had not reached beyond the wound. When, however, we consider the rapidity with which the blood and juices flow, it seems impossible we can ever wholly depend on such an operation. I should nevertheless advise it to be done; after which let the part be well soaked with the Solar Tincture; and, to fortify the blood, let the patient swallow a table-spoonful every three hours, *undiluted*, for the first day; and the same dose night and morning, for a month following. Let the part be again soaked with the Tincture four times a day, for three or four days; and I am satisfied a safe and perfect cure may be relied on. For the bite of adders, snakes, &c.
bathing

bathing the part, and taking the medicine *undiluted*, will counteract the virulence of the poison, and preserve the patient from further injury.

FOR GUN-SHOT WOUNDS, CUTS, STABS, &c.

Gentlemen in the army and navy, and all persons liable to gun-shots, stabs, wounds, &c. should never be without the Solar Tincture. Its salutary effects on the blood, in all these cases, are really surprising. It totally prevents, and will even stop, mortification, in very advanced stages. It quickly supplies the greatest loss of blood; fortifies the heart, cherishes the vital organs, and heals and unites the flesh in an uncommon degree. If taken internally, and poured at the same time into the wound, it is quickly propelled through the heart, by the veins and arteries, and thus renovates the exhausted spirits, and preserves life. Its effect on a few simple wounds may be seen in the following cases:

TO E. SIBLY, M. D.

SIR,---For the sake of those who are liable to accidents, I think it right to inform you of a most remarkable cure performed by your Solar Tincture, on a very deep and dangerous wound made on Mrs. Cook by a case-knife, of more than the depth of my fore-finger. After trying every means in vain to stop the blood, I sent for a bottle of your Solar Tincture, and well bathed the wound therewith. The blood and Tincture readily assimilated, and formed a crust on the orifice of the wound, which very soon stopped the effusion of blood.

But

But what is most remarkable, the wound was completely healed in less than six days, and is now so perfectly closed, as to be almost imperceptible. You are welcome to publish this, and in so doing you will oblige, &c.

WILLIAM COOK.

Seymour-street, Portland-square,

April 14, 1794.

TO E. SIBLY, M.D.

SIR,---In justice to my own feelings, I cannot but acquaint you with a cure performed by your Solar Tincture, in a very uncommon manner. As I was travelling in the stage to Boxley-abbey, near Maidstone, in Kent, a gentleman, who sat next me, putting his head out of the window, received a violent cut across the eye with the coachman's whip, which produced an immediate swelling and inflammation, attended with so much agony, that he declared the pain was insupportable. I had purchased a bottle of your Solar Tincture while in town, knowing it had performed many surprising cures in my neighbourhood. This I immediately opened, and applied to the inflamed part; and, after washing the eye well with it, I bound a white handkerchief tight over it, wetted with the Tincture. In less than ten minutes the anguish was greatly assuaged; and in the course of three hours it was quite well. The gentleman expressed the utmost astonishment at the celerity of the cure, as did every passenger in the coach. I wish this to be made as public as possible, for the benefit of those who are liable to accidents; and am with respect, &c.

M. STABLES,

I shall

I shall only remark further, with respect to wounds, bruises, &c. that a short time ago, as a coach was driving furiously out of Cavendish-square, the horses unfortunately beat down a girl of eight years of age, the daughter of Robert and Elizabeth Larken, of Clipston-street; and, the wheels passing over her body, she was taken up to all appearance dead. The spectators were for carrying her immediately to the hospital; but, the accident happening very near my house, I was sent for. I avoided letting blood, but bathed the bruised parts thoroughly with the Solar Tincture, and introduced half a spoonful, *undiluted*, into her stomach. It was now about nine o'clock at night. She was composed and asleep before ten, being overcome by the medicine. A spoonful more of the Tincture was given her at different periods of the night, the sudorific power of which brought on a plentiful perspiration. At ten o'clock the next morning she awoke, and got up, and was so well recovered as to be able to play about with her companions, in all respects the same as if nothing had happened. The girl, and her parents, are pleased with every opportunity of recounting the circumstances of this event to any enquirers.

Let it not be said, that, because this medicine appears to be prescribed for many disorders, it can be good for none.---I affirm, that every complaint for which it is recommended, *originates in the blood, or in obstructed perspiration*. The action of the Solar Tincture is on the blood and juices; it strikes at the root and not at the branches; by which peculiar advantage it effects a
cure

cure when other medicines fail. For this reason the proprietor, unwilling to withhold from the afflicted in every line of life the benefits of his discovery, has determined to render it to the public at only 7s. 6d. the small, and 13s. the large, bottles, duty included, with ample directions in every complaint for which it ought to be administered.---A single bottle will in many cases perform a speedy cure, when, in the ordinary course of medical practice, it would occupy a month, and cost many pounds for unnecessary attendance, and an excess of drugs.

It is sold at my house, No. 1, Upper Titchfield-street, Cavendish-square; by Mr. Williams, perfumer to his majesty, No. 41, Pall Mall; at Melvin's perfumery warehouse, No. 70, New Bond-street; at J. Wye's medicinal warehouse, No. 59, Coleman-street; at the British Directory-office, Ave-Maria-lane, St. Paul's; and by all retailers of patent medicines in the country.

Wholesale orders must be addressed to Mr. Wye, No. 59, Coleman-street, being the only place in London where country orders for the medicine are executed, the perpetual calls of my extensive practice rendering it impossible for me to attend to them.

In order to make a trial of these medicines as little expensive as possible, and convenient to persons residing in every part of the kingdom, and to convince the world I do not desire any dealer to risk his money upon an article he might perchance never sell, I have given orders that any stationer, grocer, or dealer in

medicines, in the country, on writing to his London correspondent, shall be supplied *with a single bottle*, up to any quantity, at the wholesale price.

OF THE PRINCIPLES OF LIFE AND DEATH.

Above all, the efficacy of the Solar Tincture is most strikingly manifested, by its stimulating and re-animating powers, in cases of accidental or sudden death. Life denotes the animated state of nature; and in human beings, exists as long as an union of the soul and body lasts. With us, therefore, life continues, until such separation has really taken place; which can no more be said to have happened during the paroxysm of a fit, or of a blow which for a time deprives us of sensation, or in the *early* period of an unnatural or sudden death, than during the time we are asleep. It is the want of proper skill at such times that too often occasions death to take place, when life absolutely exists in the blood, and might with little care have been preserved. Death is therefore the act of separation of the soul from the body; in which sense it stands opposed to life, which consists in the union thereof. An animal body, by the actions inseparable from life, undergoes a continual change, and receives its dissolution by degrees. Its smallest fibres become rigid; its minutest vessels grow into solid fibres no longer pervious to the fluids; its greater vessels grow hard and narrow; and every thing becomes contracted, closed, and bound up: whence the dryness, immobility, and extenuation, observed in old age. By such means the

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offices

offices of the minuter vessels are destroyed; the humours stagnate, harden, and at length coalesce with the solids. Thus are the subtilest fluids in the body intercepted and lost, the concoction weakened, and the reparation prevented; only the blood continues to run slowly through the greater vessels, assiduous to preserve life, even after the animal functions are destroyed. At length, in the process of these changes, death becomes inevitable, as the necessary consequence of life. But it is rare indeed that life is thus long protracted, or that death succeeds merely from the natural decays and impairment of old age. Accidental diseases, and our neglect of preserving health, cut the work short.

The signs of death are often very uncertain. If we consult what Winslow or Bruchier have said on this subject, we shall be convinced, that between life and death the shade is so very undistinguishable, that even all the powers of art can scarcely determine where the one ends and the other begins. The colour of the visage, the warmth of the body, and suppleness of the joints, are but uncertain signs of life still subsisting, while, on the contrary, the paleness of the complexion, the coldness of the body, the stiffness of the extremities, the cessation of all motion, and the total insensibility of the parts, are but uncertain marks of death begun. In the same manner also, with regard to the pulse and breathing; these motions are so often kept under, that it is impossible to perceive them. By bringing a looking-glass near to the mouth of the person supposed to be dead, people often expect to find whether he

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breathes

breathes or not. But this is a very uncertain experiment: the glass is frequently sullied by the vapour of the dead man's body; and often the person is still alive, though the glass is no way tarnished. In the same manner, neither noises in the ears, nor pungent spirits applied to the nostrils, give certain signs of the discontinuance of life; and there are many instances of persons who have endured them all, and afterwards recovered without any external assistance, to the astonishment of the spectators. This surely ought to be a caution against hasty burials, especially in cases of sudden death; for it is shocking to reflect, that some hundreds of valuable members of society are annually torn from their disconsolate families by some accidental sudden cause, and hurried thoughtlessly to the grave, in whom the principles of life were capable of being revived! This lamentable truth has been established by the happy success of the Humane Society, from whose laudable exertions several hundred persons have been restored to life, who, to all visible appearance, *were past recovery*. Every age and country affords some instances of persons having been recovered, even after lying long for dead; and from the number of those preserved by mere lucky accidents, it is evident that still greater numbers might be saved by timely pains and skill. Those who have contemplated the structure of the human machine know, that its dissolution cannot *naturally* happen but by that gradual decay of the whole system above described, when the vessels are become impervious to the fluids, the circulation weakened or destroyed,

and the vital organs no longer able to perform their office. But, when their functions are merely suspended by some sudden shock, it may be likened to the state of a watch stopped by a fall, which resumes its motion the instant that injury is repaired. In the animal œconomy, "*the BLOOD is the LIFE*;" * therefore, if

* The shocking case of Mr. Groundwater, who was most inhumanly murdered on the 23d of May last, by the convicts in Cumberland Fort, near Portsmouth, manifests the truth of this remark. The above unfortunate person was deputed to overlook the convicts in their working hours; when having occasion to reprimand two of them for misbehaviour, namely, Francis Jennison, and William Butterworth, who were under sentence of transportation for life, they fell upon the unhappy man with the iron shovels with which they were at work; and, having thrown him down, they struck the sharp edge of the shovels several times into his head, whereby the cranium was penetrated, and so large a fissure made, that part of the brains hung upon the spade, and the residue fell out upon the ground, in the quantity of a double handful. They then struck down one of the shovels on his neck, with an evident design to sever the head from the body; but, striking against the bone, it had not the intended effect. Now it is a most extraordinary circumstance, attested by several witnesses on the trial of these inhuman wretches, who were convicted of the murder at the ensuing Winchester assizes, and executed on the 4th of August, 1794, that Mr. Groundwater lived eighteen hours after he had received the above grievous wounds, and after the whole of the brain had fallen out of the cavity of the skull. He was entirely speechless; but the action of the pulse was remarkably strong, and respiration visibly continued, during the whole of the eighteen hours above-mentioned. This was positively attested on the oath of Mr. Hill, the surgeon who attended him, and taken down as a most singular case, by Sir Nash Grose, who tried the prisoners. This fact therefore clearly decides the long-contested point among physiologists, whether the seat of life is in the heart, or in the brain? for it evidently shews that the life is in the blood, seated in its grand reservoir the heart, which if ever so slightly wounded or impaired, the circulation ceases, and death instantly follows.

its

its circulation be suspended or destroyed, death follows. But if the blood can be re-agitated, and its circulation resumed, life will of necessity be restored. For this reason, whenever any accident has happened, by which sudden death appears to have taken place, whether by blows, fits, falls, suffocation, strangulation, drowning, apoplexy, convulsion-fits, thunder and lightning, assassination, duelling, or the like, let the unfortunate person be carried into a warm house, and laid by the fire, or put into a warm bed; let two or three table-spoonfuls of the Solar Tincture be introduced as early as possible into the stomach, and rubbed profusely in by a warm hand, upon the spine of the back, loins, breast, and region of the heart, and poured into the wound, if there be any; the warm stimulating quality of the medicine, assisted by the external heat and friction, will quickly rouse the stagnant blood and juices, particularly in the grand reservoir the heart, where, rarefying, pressing every way, and being resisted by the valves, it will swell so as to fill the flaccid right auricle of the heart, which by the shock had become empty and at rest; and thus stimulating its fibres, will put them in motion. The right auricle being thus filled and stimulated into contraction, fills the ventricle; which, by this means being irritated, likewise contracts and empties itself into the pulmonary artery; and the moment this is done the circulation begins again where it left off; and the lungs, being filled by the dephlogisticated air contained in the medicine, begin to act, and life is restored, provided the organs

organs and juices are in a fit disposition for it; which they undoubtedly are much oftener than is imagined. Nor is this stimulating action of the Tincture upon the heart at all surprising; for every medical man knows, or ought to know, that the heart, even when taken out of the body, if it be pricked with a pin, or hath warm water thrown upon it, will beat afresh, and endeavour to exert its functions, though for some time before it had been motionless. No person therefore ought to be considered *dead*, until the energy of the blood is so far gone, that it can never again be agitated so as to fill and stimulate into contraction the right *sinus venosus* and auricle of the heart.

When the patient is thus far recovered, he ought to be treated with great care and tenderness; and some warm milk, wine and water, elder-flower tea, or any nourishing spoon-meat, should be given to him as soon as he appears capable of taking food. In some cases it may be necessary to open the temporal artery and the external jugular, or to bleed in the arm; but this should never be done if it can safely be dispensed with, as it certainly weakens the animal principle, which it is the first object of this medicine to strengthen. Under different circumstances, and as particular occasions may require, the rules laid down in p. 196 of my Family Physician, and recommended by the Humane Society, will be found of considerable advantage. Above all, let me entreat an anxious perseverance in this sublimest of all virtues---the attempt to recover perishing lives. Humanity calls for it in the most moving accents; and what

what can inspire a good heart with more sincere, perfect, conscientious, and commendable, satisfaction, than a retrospect of such endeavours as have been generously exerted and successfully contributed to recover, perhaps to restore, the life of a fellow-creature from that most deprecated calamity---sudden death, with its alarming retinue of threatening consequences to those who die unprepared? since, by thus preserving a sinner to a future period, perhaps a soul may emerge in full maturity to felicity which shall have no end!

To demonstrate the re-animating power of the medicine, experiments may be made upon a fowl, lamb, cat, dog, or other animal, by plunging them under water until they are apparently dead, or piercing them through the head, or any part of the body except the heart; by suffocation, or an electrical shock: for sudden death, howsoever it happens, whether by drowning or otherwise, is much the same as to its effects on the vital organs; consequently they are all to be treated in a similar manner.

Upon the whole it is evident, that by contemplating the œconomy and harmony of our structure, both external and internal, we may quickly discern a proper line of conduct for the conservation of health, and the prolongation of life; and we shall also perceive a more august view of the marvellous works of divine wisdom in the structure of the human breast, than we shall perhaps again find in the whole compass of nature. The gift of health was evidently the design of our benevolent Creator in the construction of our bodies;
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it is therefore no less our duty than our interest to preserve this blessing to our latest moments, as the seasoning and fund which gives the relish to all our other enjoyments. To enumerate the various abuses of health, which take place from our earliest infancy, particularly among the rich and gay, and which are continued through the succeeding stages of modish life, would fill a volume. Suffice it to observe, that they prevail more particularly among people who are the most highly polished and refined. To compare their artificial mode of living with that of nature, would afford a very striking contrast, and supply an obvious reason why persons in the lower orders of society are generally the longest lived, and enjoy the best state of health; and hence we are warranted to conclude, that a large proportion of the diseases to which we are subjected are produced by ourselves.

Notwithstanding this unaccountable abuse of our health, yet the want of it unfits us for most of the common avocations of life, and is more especially an enemy to the social and humane affections, as it generally renders the unhappy sufferer peevish and fullen, disgusted at the allotments of Providence, and apt to induce suicide, by suggesting gloomy and suspicious sentiments of the Almighty. It obstructs the free exercise and full improvement of our reason, makes us a burden to our friends, and useless to society. Whereas the uninterrupted enjoyment of health is a constant source of good humour, and good humour is a great friend to openness and benignity of heart; enables us
to

to encounter the various ills and disappointments of this world with more courage, or to sustain them with more patience; and, in short, conduces much, if we are otherwise duly qualified, to our acting our part in every exigency of life with more firmness, consistency, and dignity. Therefore it imports us much to preserve and improve the habit of its enjoyment, without which every other external entertainment is tasteless, and most other advantages are of little avail. To this end, we ought above all things to cultivate prudence, temperance, sobriety, fortitude, and equanimity of temper; for without a prudent care of the body, and a steady government of the mind, to guard the one from disease, and the other from the feuds of passion and prejudice, sound health is unattainable. By temperance we enjoy the real gratifications of life, without suffering any consequent inconvenience. Sobriety enables us to be content with simple and frugal fare, and protects us from the pain and disgrace of intoxication. Fortitude enables us to bear those infirmities which prudence and sobriety cannot shun, and banishes all dread of imaginary evils from our thoughts. Equanimity of temper contributes greatly to the happiness of life, as well as to the preservation of health, by preserving the mind from anxiety and perturbation, and arming us against the calumnies and animosities of human nature. Violent passions, and the excesses they induce, gradually impair and wear away the constitution; whilst the calm and placid state of a temperate mind, and the healthful exercises of the body, preserve

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the

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the natural functions in full vigour and harmony, and exhilarate the spirits, which are the chief instruments of action. The worst consequences that could possibly result from a strict adherence to this regimen, would be that of exterminating a swarm of locusts, and of rendering the discovery of my medicine of much less importance to the community.

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