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ARE DRUGS BETTER THAN THE WISDOM OF THE BODY?

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Exactly what is the "wisdom" of the body? What does it consist of? Where does it come from? How can we take advantage of it? Can it be fortified or improved? The term was popularized following the 1932 publication of *The Wisdom Of The Body* by Walter Cannon, Chairman of the Department of Physiology at Harvard Medical School. Two decades earlier, in *Bodily Changes In Pain, Hunger, Fear And Rage*, he had described the remarkable capacity of laboratory animals to cope with sudden and severe stress by instantaneous and involuntary activities involving systems and structures all over the body. He marveled at their diversity and complexity and concluded that they had been designed to preserve life by facilitating "fight or flight".

These responses were primarily due to an outpouring of an adrenaline-like hormone he called "sympathin", because it seemed to stimulate the sympathetic nervous system. He subsequently became intrigued with the body's ability to preserve life under normal circumstances by constantly maintaining temperature, blood pressure, concentrations of sodium, potassium, glucose and other substances within relatively strict limits. Cannon coined the term "homeostasis" to describe these automatic activities that were presumably due to the "wisdom" of the body.

However, he was not the first to use this phrase. "The Wisdom of the Body" was the title of Ernest Starling's Harveian Oration before the Royal College of Physicians and Surgeons in 1923. This annual address had been established

to celebrate William Harvey's achievement in explaining how the heart circulated blood throughout the body three centuries earlier. Starling had a special interest in the heart and since his lecture fell on St. Luke's Day, he began it with the biblical quotation "*Who hath put wisdom in the inward parts? Or who hath given understanding to the heart?*" A renowned physiologist, Starling had previously introduced the term hormone in a prior address to this group two decades earlier. As a result, his presentation dealt not only with adaptive changes in the heart when subjected to stress, but also similar progress in hormone research. It included a reference to Cannon's early studies, the recent discovery of insulin by Banting and Best, and advances in our understanding of how the pituitary, thyroid and other endocrine glands functioned. Starling skillfully explained how Nature had integrated endocrine and nervous system activities in a masterful manner in order to preserve health. He emphasized in his conclusion that "only by studying 'the secrets of Nature' by way of experiment — can we hope to attain to a comprehension of 'the wisdom of the body' and of the understanding of the heart and thereby to the mastery of disease and pain which will enable us to relieve the burden of man." As Cannon acknowledged in the Preface to his own book, "Because my convictions coincide with those of Professor Starling, and because the facts and interpretations which I shall offer illustrate his point of view, I have chosen to give the title of his oration to the present volume."

Sir Charles Sherrington was also intrigued by Starling's interest in integrative functions in the body and had delivered a series of lectures on how this had been achieved in the nervous system. A celebrated neurophysiologist, he shared the Nobel Prize in 1932 with his friend and colleague Edgar Adrian, for their "discoveries regarding the functions of neurons". Sherrington, who coined the words "neuron" and "synapse", said he envisioned the brain and nervous system as "an enchanted loom", where "millions of flashing shuttles weave a dissolving pattern, always a meaningful pattern, though never an abiding one." His 1940 book, *Man On His Nature*, that discussed the distinctions between mind and brain, included an attempt to reconcile religious beliefs with scientific advances. One perplexing question was how cells were programmed to perform so many different functions, and why only this function was subsequently retained in that cell during its repeated divisions. He illustrated this in Chapter 4 by meticulously tracing how an embryo develops from a single cell into its ultimate human shape. Because there seemed no other way to explain how the information for both form and function was contained in the original cell, he entitled this chapter "The Wisdom of the Body".

Over five decades later, Sherwin Nuland's *The Wisdom Of The Body* provided an even more comprehensive tribute to the marvels and mysteries of the

body, as well as its resilience. A practicing physician and Clinical Professor of Surgery at Yale School of Medicine, Nuland is clearly awestruck as he explains how various systems in the body are able to automatically adapt to sudden unanticipated stresses. He vividly illustrates this by using pertinent accounts of his personal patients. As he concluded:

> The integration of all parts of this effort has a seeming wisdom about it, by which the multiplicity of processes is somehow guided into a harmonious whole. The essence of success is the dynamism that allows each cell to respond instantaneously to even the most minor threat to its integrity, and therefore the integrity of the entire organism.

The Healing Powers Of Nature, "Tincture Of Time" And Galen

All of the above and other well-deserved paeans of praise to the body's predestined and often puzzling innate potential to maintain health supports the notion that Nature somehow knows best with respect to preserving health and preventing illness. However, this was hardly a new concept. Similar beliefs can be found in early Chinese, Indian and Egyptian writings, as well as the roots of Western medicine. The ancient Greeks believed that all diseases were due to some imbalance of the four humors that circulated throughout the body: blood, phlegm, black bile and yellow bile. Each of these was directly related to one of the four natural elements, fire, air, earth, and water, as well as their associated qualities of hot, dry, cold and wet. It was thought that these humors were moved and mixed in the body by an "innate heat" (*calidum innatum*) that was generated by the heart. This heat was also responsible for extracting and developing each humor from various foods. The four humors not only controlled bodily functions, but also mind and mood. With respect to the latter, the heart, rather than the brain, was believed to be the seat of emotions, feelings and thoughts.

Over 24 centuries ago, Hippocrates, "The Father of Medicine", emphasized the importance of diet and exercise to maintain good health, and that illness was due to agencies that disturbed humoral equilibrium. These included weather and other environmental influences, as well as mood and emotions. He reasoned that these external and internal natural forces might therefore be utilized to cure illness, "Natural forces are the healers of disease . . . . Healing is a matter of time, but it is sometimes also a matter of opportunity. . . . **To do nothing is also a good remedy**. (*Epidemics*, VI.V.1)

Thus, "Tincture of Time" and letting things take their natural course was often preferable to bloodletting or purging to take advantage of the body's natural potential for self-healing. Hippocrates referred to this as the ***vis medicatrix naturae* (healing power of nature)**. These and other Hippocratic teachings were further developed and expanded 600 years later by Claudius Galen, a brilliant second century Roman physician and

philosopher of Greek origin. He had gained fame by his superior success in treating the wounds of gladiators and subsequently served as physician to Marcus Aurelius and other Roman emperors. Because dissecting human corpses was banned at the time, Galen studied the anatomy of the cardiovascular, nervous and other systems in animals, especially monkeys, since they were most similar to man. He also investigated function and demonstrated that cutting nerves in the neck caused paralysis of the shoulder muscles, and how severing the recurrent laryngeal nerve resulted in voice loss. To prove that urine was made in the kidneys rather than the bladder, as was generally believed, he tied off the ureters and showed that this caused kidney swelling. He successfully performed cataract surgery using a thin needle and suction and operated on the brain and other structures his colleagues would not attempt. All that was known of anatomy and physiology stemmed from Galen. His views on all aspects of medicine were so prodigious that he allegedly employed 20 scribes to record his thoughts, which resulted in some 600 lengthy treatises. Most of these Greek manuscripts were destroyed in a fire, but those that have been preserved in various translations testify to his genius and the diversity of his interests.

"Bleeding" a patient back to health was based on Hippocrates' belief that menstruation purged women of "bad humors". Galen had discovered that veins and arteries were filled with blood, not air as had been assumed. (The word artery means air pipe). Since he was unaware of the circulatory system, he believed blood could stagnate in various parts of the body, especially the extremities. Since blood was the dominant humor and required the most control, he provided precise instructions on the best way to remove excesses based on the disease, its location in the body, and whether it should be arterial or venous blood, which he recognized were different. He created a complex formula of how much blood should be removed based on the patient's age, constitution, the season, the weather and other factors like the vessel's presumed link to the affected organ, Thus, a vein in the right hand would be let for liver problems, whereas one in the left hand was used for disorders of the spleen. Applying heated cups and leeches to affected parts of the body to draw out blood were also employed, and continue to be popular remedies in some cultures.

Galen believed that mind and body were inseparable and that physical disease could be related to emotions and mood. Melancholy was due to an excess of black bile (Gr. *mélas chole*), and in *De Tumoribus,* his treatise on tumors, he observed that melancholy women were particularly prone to the development of cancer of the reproductive organs. As noted in previous Newsletters, several studies over the last two centuries have confirmed a higher incidence of cancer of the breast and cervix in women who are depressed. Disturbances in the other humors were associated with different

diseases and dispositions, and vestiges of these beliefs still survive when we describe someone's personality as being sanguine, phlegmatic, bilious, choleric, jaundiced, splenetic, or galled. Even though much of what Galen taught was eventually disproved, it is impossible to overestimate his influence on medieval medicine. He was often referred to as "The Medical Pope of the Middle Ages" because his views were regarded as gospel, and disputing them guaranteed swift and severe punishment.

Many historians believe that modern medicine began in 1543 with the publication of *De Humani Corporis Fabrica* by Andreas Vesalius, with its detailed anatomical drawings of human cadavers that contradicted Galen's animal studies. The violent repudiation of this masterpiece was so great that Vesalius was forced to flee from Padua, burn all his manuscripts, and to cease any further studies of human anatomy. The next person to refute Galen and regret it was Michael Servetus, who demonstrated that blood flowed from one side of the heart to the other through the lungs, not as Vesalius had proposed, via invisible pores between the two ventricles. Soon after publishing this blasphemy, Servetus was burned at the stake for heresy. William Harvey's magnum opus, *De Motu Cordis*, also showed that blood circulated through the lungs, as well as the rest of the body. It was written in 1612, but he delayed its publication for 16 years, because of fears that he would suffer the same fate as Servetus or banned from practicing medicine. As anticipated, he was reprimanded and rebuked by his colleagues, but was later rewarded for his discoveries by being appointed physician to King Charles I, to whom the book had been dedicated.

Some of Galen's recommendations, like blood letting, especially for fever, continued to be practiced well into the nineteenth century. Some still persist, such as "Feed a cold and starve a fever", which dates back to Hippocrates. The original English 16th century translation was actually "stave a fever", as in "stave off" or "keep away", by cutting off the fuel supply. Galen favored daily blood letting from the veins to cool the body, and if the fever was severe, this was done twice a day, or until the patient fainted. Although he was not a Christian, some of Galen’s treatises suggest that he believed that the body was an instrument of some single higher power. This made him very acceptable to church officials as well as Arab and Hebrew scholars, all of whom were significantly influenced by his writings. Doctor originally meant teacher (Latin *docēre* "to teach") and Galen believed that the main function of the physician was to teach patients how to achieve and maintain health and that they should be grounded in sound knowledge or "philosophy" as it was called in his time. He was very critical of the greed of his colleagues, and in a treatise entitled *That the best Doctor is also a Philosopher*, emphasized that the profit motive was incompatible with a serious devotion to the art of healing. Like Hippocrates, he taught that it was

often better to rely on the healing power of Nature than remedies promoted by physicians that might do more harm than good. An old Chinese proverb had similarly warned, "Nature is better than a middling doctor".

Opinions From Famous Physicians And Others About Doctors And Drugs

Since Galen was irrefutable, it is no surprise that his advice to be wary about relying on physicians also became an important and recurrent theme in Western writings. So did his recommendation of "Tincture of Time" to allow Nature to heal. The expression "Time heals all wounds" still persists, as do controversies over whether such healing is due to Nature or God; if Nature and God are synonymous, whether their alleged healing powers might really result from evolutionary changes based on Darwin's theory of the "survival of the fittest"; what the role of the doctor should be; and whether physicians or their prescriptions could be trusted. Thoughts on how some of these issues have evolved over the past five centuries include:

"*As tyme hem hurt, a tyme doth hem cure*" (*Troilus & Criseyde*)
Geoffrey Chaucer, circa 1385

In Switzerland, Paracelsus (1493-1541), the leading physician of his day, pioneered the use of chemicals and especially minerals in medicine. But he similarly believed that their effects, as well as all health, ultimately depended on the power of Nature, and warned "The physician is only the servant of Nature, not her master. Therefore, it behooves medicine to follow the will of Nature . . . . . The art of healing comes from Nature, not from the physician." (*Seven Defenses*, Chapter 4)

In France, Michel de Montaigne was even more critical of physicians and particularly their prescriptions for his attacks of "colic" due to kidney stones.

> The very constituents selected for their remedies recall mystery and sorcery: the left foot of a tortoise, the urine of a lizard, the droppings of an elephant, the liver of a mole, blood drawn from under the right wing of a white pigeon: and for those of us with colic paroxysms (so contemptuously do they abuse our wretchedness) triturated rat-shit and similar apish trickery which look more like magic spells than solid knowledge. I will not even mention pills to be taken in odd numbers; the designation of particular days and festivals as ominous; the prescribing of specific times for gathering the herbs for their ingredients; and the severe, solemn expression on doctors' faces which even Pliny laughs at.
>
> Where doctors went wrong is that they did not also make their assemblies more religious and their deliberations more secret: Because of this error their uncertainties and the feebleness of their arguments, of their guesswork and of their premises, as well as the bitterness of their disagreements (full of hatred, of envy and personal considerations), have all

> been revealed to everybody, so that a man must be wondrously blind if he does not feel at risk in their hands.

Montaigne recognized the important role of faith in healing and again urged physicians not to interfere with natural healing, which was God's will:

> It has proved a rule good for the Art (found in all vain fantastical supernatural arts) that the patient must first trust in the remedy with firm hope and assurance before it can work effectively. They cling to that rule so far as to hold that a bad doctor whom a patient trusts is better than the most experienced one whom he does not know.
>
> Let us let things take their course; the scheme of things that takes care of fleas and moles also takes care of men who have the same patience to let themselves be governed as fleas and moles. . . . . Let us follow along, in God's name, let us follow. I repeat, follow! That Order leads those who follow: those who will not follow will be dragged along, medicine, terror and all. . . . Order a purge for your brain; it will be better employed there than on your stomach. (*Essays*, Book II, Chapter 37) 1580

Five centuries ago, the distinguished French surgeon, Ambroise Parè (1510-1590), similarly said "*Je le pansay et Dieu le guarit*" (**I dressed the wound and God healed it**). The role of the physician was mainly to "*Guérir quelquefois, soulager souvent, consoler toujours*", (Cure occasionally, relieve often, console always). His contemporary, Pierre Charron, whose *De La Sagesse* (About Wisdom) was one of best books on the healing powers of Nature, wrote "**The most that a doctor can do is to assist the body in making use of this power, which is nothing more than the action of the unconscious mind.**" Charron claimed that the nature and existence of God are unknowable because of God's infinitude and man's weakness. He believed that morality had no connection with religion and that man's reason based on knowledge was responsible for both behavior and health. **It was not reason, but blind faith that was necessary for accepting the Roman Catholic Church as the ultimate authority.**

Sir Francis Bacon (1561-1627), best known for establishing the scientific method based on experimentation and inductive reasoning, believed that God gave man these powers and did not accept the infallibility of religious dogma. In his *De Interpretatione Naturae Prooemium* (Concerning the Interpretation of Nature) and other works like *Of Atheism,* he noted:

> In every age, natural philosophy had a troublesome adversary and hard to deal with; namely, superstition, and **the blind and immoderate zeal of religion.**

> Such is the way of all superstition, whether in astrology, dreams, omens, divine judgments or the like, wherein men, having a delight in such vanities, mark the events where they are fulfilled, but where they fail,

> though this happen much oftener, neglect and pass them by. . . . **Man prefers to believe what he prefers to be true.**
>
> Atheism leaves a man to sense, to philosophy, to natural piety, to laws, to reputation, all which may be guides to an outward moral virtue, though religion were not, but superstition dismounts all these, and erecteth an absolute monarchy in the minds of men.
>
> Man, being the servant and interpreter of Nature, can do and understand so much and so much only as he has observed in fact or in thought of the course of nature. Beyond this he neither knows anything nor can do anything. (emphasis added)

Sir Thomas Browne wrote that Nature was "the art of God" in his 1643 *Religio Medici* (The Religion of a Doctor), which emphasized the Christian virtues of Faith, Hope and Charity. He also included lengthy discussions of magic, sorcery witchcraft, alchemy and astrology, and confessed "I have often admired the mystical way of Pythagoras and the secret magicke of numbers." In addition to these unorthodox views, he supported the Protestant church of England, so it is not surprising that a year later, *Religio Medici* was put on the *Papal Index Librorum Prohibitorum,* the official Roman Catholic censor list of forbidden reading. Nevertheless, it was quickly translated into other languages and became a best seller in Europe. Browne found no conflict between Nature and the man made products or services he refers to as "art". After all, both were the works of God.

> Now nature is not at variance with art, nor art with nature; they being both the servants of his providence. Art is the perfection of nature. . . . Nature hath made one world, and art another. In brief, all things are artificial; for nature is the art of God. (*Religio Medici* Part I, Section 16) 1643

Similar opinions from folklore as well as other notables include:

"The doctor is often more to be feared than the disease." Old French Proverb

"Medicine can only cure curable disease, and then not always." Chinese Proverb

"Oh the powers of nature. She knows what we need, and the doctors know nothing." Benvenuto Cellini 1500-1571

"I find the medicine worse than the malady." John Fletcher 1579-1625

"Nature can do more than physicians." Oliver Cromwell 1599-1658)

"More men die of their medicines than their diseases." Molière 1622-1677

"Better to hunt in fields, for health unbought,
Than fee the doctor for a nauseous draught,
The wise, for cure, on exercise depend;
God never made his work for man to mend." John Dryden 1631-1700

"*The art of medicine consists in amusing the patient while nature cures the disease."*

"*Doctors are men who prescribe medicines of which they know little, to cure diseases of which they know less, in human beings of whom they know nothing.*"

"*Regimen is superior to medicine, especially as, from time immemorial, out of every hundred physicians, ninety-eight are charlatans."* Voltaire 1694-1773

"*Nature performs the cure, the physician takes the fee.*"

"*He is the best physician that knows the worthlessness of most medicines*." Benjamin Franklin 1706-1790

"Poisons and medicine are oftentimes the same substance given with different intents." Peter Mere Latham (English physician) 1789-1875

"Treat as many patients as possible with the new drugs as soon as they come out, before they lose their effectiveness." Armand Trousseau (French physician) 1801-1867

"I firmly believe that if the whole materia medica could be sunk to the bottom of the sea, it would be all the better for mankind and all the worse for the fishes." Oliver Wendell Holmes 1809-1894

"The first duties of the physician is to educate the masses not to take medicine." Sir William Osler 1849 –1919

The Crucial Role Of Faith In Healing And Health Enhancement

This very negative view of drugs and doctors is not difficult to understand. With the exception of extracts of the foxglove plant for dropsy, or bark from the cinchona tree for fever, there were few medications that really worked. Even these were inconsistent. Physicians were unaware that foxglove's digitalis only relieved dropsy due to heart failure or that the benefit of quinine in cinchona bark was limited to patients with malarial fever. Preparations from willow trees and salicylate rich plants had been used for thousands of years to reduce pain and fever, but aspirin and other pharmaceuticals were not developed until the 20th century. The medicines that Osler referred to were "patent medicines", which soared in popularity after the Civil War because they were aggressively advertised in newspapers, magazines and especially mail order catalogues like Sears Roebuck and Montgomery Ward. With the advent of Rural Free Delivery, catalogues attracted numerous farmers and their families far removed from

towns and post offices for all their purchases. Patent Medicines were also heavily promoted by traveling "medicine shows" that were a combination of vaudeville and circus acts, that culminated in a pitch for products with colorful names and compelling claims. Shills were usually employed to step forward from the audience and give spontaneous testimonials to the wonders of the unique and secret formula product, which was often manufactured and bottled in the same wagon that the show traveled in.

Many of these concoctions had high alcohol contents and some contained cocaine, opium and other substances with a rapid and pleasant effect that could lead to addiction. These nostrums were trade marked, rather than patented, which would have required listing all ingredients. Although their claims and constituents have been revised, some are still sold today, such as:Bromo-Seltzer, Geritol, Phillips' Milk of Magnesia, Vicks VapoRub, Luden's and Smith Brothers Throat Drops, Doan's and Carter's Little Liver Pills. The best seller Lydia Pinkham's Vegetable Compound for female complaints, has also survived minus its 18 percent alcohol, and contains black cohosh that has been shown to relieve menopausal complaints. Some with cocaine and other harmful ingredients removed, have became popular beverages, including: Coca-Cola, Dr Pepper, Hires Root Beer, 7-Up, tonic water, and Bovril "beef tea. A drop or two of Angostura bitters, originally used to mask the taste of quinine in tonic water, is included in an Old Fashioned, Whiskey Sour, Manhattan and other popular cocktails, as well as to season foods.

Although bacteria were proven to cause diseases in the late 1800s, effective antibiotics were not widely available until well over a half-century later. The major therapies available to physicians prior to 1900 were blood letting, purging and other remedies now discarded as worthless for the disorders they were used to treat. One British medical text recommended bloodletting for over 100 diseases, including acne, asthma, cancer, cholera, coma, convulsions, diabetes, epilepsy, gangrene, gout, herpes, indigestion, insanity, jaundice, leprosy, ophthalmia, plague, pneumonia, scurvy, smallpox, stroke, tetanus, tuberculosis, and even nosebleeds, excessive menstruation, or hemorrhoidal bleeding. It was also used prior to surgery or at the onset of childbirth to prevent inflammation. And before amputation, it was customary to remove a quantity of blood equal to the amount thought to be contained in the limb that was to be removed. But bloodletting has been popular for thousands of years and it is unlikely to have lasted for so long in so many different cultures unless it provided some rewards. The ancient Mesopotamians, Egyptians, Greeks, Mayans and Aztecs all practiced bloodletting and the Talmud specified which day of the week and days of the month to get the best results. Christian writings similarly advised which saints' days were the most favorable and Islamic physicians also prescribed it, especially for fevers. Bleeding was often the treatment of choice for

physicians, although it was frequently performed by barber surgeons. The red-and-white-striped poles of today's barbershops are derived from this practice: the red represents the blood being drawn, the white is for the tourniquet that was used, and the pole itself depicts the stick squeezed in the patient's hand to dilate the veins..

William Harvey debunked the practice in 1628 and could not understand the numerous reports attesting to its success. Charles Alexandre Louis, a French physician who was one of the founders of medical statistics, conclusively proved in 1835 that bloodletting was not only worthless for fevers and pneumonia, but could also be dangerous and deadly. George Washington's death from a respiratory infection has been attributed to repeated and excessive bloodletting that he requested, and which was approved by his three physicians. Nevertheless, this procedure persisted well into the 20th century and was still being recommended in the 1923 edition of Osler's *The Principles and Practice of Medicine,* the most respected textbook of its day.

One obvious explanation for many cures is that fevers from respiratory and other infections are often self-limited and resolve without any intervention. In addition, as Sir Francis Bacon noted, **people prefer to believe what they want to believe.** As he also emphasized, **they tend to remember only the few times that the healer or the procedure they had faith in was successful, and will deny or forget all the many other failures.** Paracelsus recognized that the ability to heal was largely due to the patient's faith in the healer rather than the remedy. "Medicine is not merely a science but an art. **The character of the physician may act more powerfully upon the patient than the drugs employed**." Three centuries later, the English poet Samuel Taylor Coleridge, similarly wrote, "He is the best physician who is the most ingenious inspirer of hope." However, this is not limited to hope or faith in a physician or medication, but anything, as illustrated by the power of placebos. an Arabic proverb states, "**Have faith, though it be only in stone, and you will recover**." (emphasis added)

It is impossible to overestimate the ability of the mind to influence health, and advances in psychoneuroimmunology have increasingly uncovered the mechanisms of action that mediate positive as well as negative effects. Shamans, witch doctors, medicine men and faith healers have persisted in different cultures for centuries because their success stemmed from faith in or fear of their presumed power over life and death. Some feel this also explains why mainstream religions have lasted so long. The New Testament says, "The prayer of faith shall save the sick." (*Jame*s 5:15), and miraculous cures are reported from drinking or sprinkling holy water, pilgrimages to shrines, or touching the relic of a saint. Are such marvels also manifestations of the "wisdom of the body", are they due to divine intervention in response

to prayer, or is our amazing ability to cope with stress best explained by progressive improvements over the millions of years of human evolution?

Many people believe that all disease is the result of some sin that must be atoned for properly to obtain salvation, that the Bible, Koran and other holy books are the word of God and that the Pope, or other religious leader is infallible. Others, like H. L. Mencken, contend that such blind faith is "an illogical belief in the occurrence of the improbable." There has been a lengthy conflict between science and religion starting with the condemnation of Galileo for suggesting that the earth and other planets revolved about the sun. Women accused of being witches are still burned at the stake in some parts of the world, and exorcism remains an accepted practice in the Roman Catholic Church and others for demonic possession. This schism between science and religion has recently become more heated with debates over whether teaching evolution in schools should be banned and President Obama's choice for physicians to head the two top U.S. health posts. These and other disputes have also resulted in differing opinions of how the body attains its wisdom (or lack of it), as well as why stress influences health.

Some have argued that the purpose of science is to find out how, whereas religion deals primarily with why, so is there really a conflict? The problem is that the distinction between how and why can be blurred as the two are combined, particularly when attempting to explain medical opinions. The evolution of the current contentious conflicts between religious dogma and physicians will be discussed in our next Newsletter —— so stay tuned!

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