Physiological Adaptations of Fasting

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Human beings, and other living things, often have been characterized as living "machines." In fact, the concept of human beings as being sophisticated machines dates back as far as the mid-eighteenth century, to the French physician-philosopher Julien La Mettrie.

Early physician-scholars such as La Mettrie could not help but be impressed by the intricacy of our many survival mechanisms that are obvious to the trained eye. Our eyes, ears, heart, lungs, and many other physical features are marvelous mechanical devices, meticulously designed by nature to aid in our survival and/or reproduction.

More impressive still is the fact that these mechanisms work together, in an orchestrated fashion. When we start to jog, our heart increases its pumping action, and our lungs work harder, in exquisite coordination with the heart. The parts work together for the "common good," which is our survival or reproductive potential. Biologists have a word for these parts, these components of our natural design. They are called adaptations.

Modern health professionals are astounded when they discover what the American Hygienic physician-philosopher Herbert Shelton described decades ago: that water-only fasting is an adaptation, and is one of the most powerful healing adaptations of the human design!

Examples of adaptations

A living creature, such as a human being, can be thought of as a large, intricate machine, comprised of many, mini-machines, each of which is themselves an adaptation. For example, our tongue is clearly an adaptation, in that it is an intricate machine, designed by nature, to assist our survival prospects.

Actually, the tongue is not a single entity, but is itself composed of many distinct parts, each of which is a component of the fabulous "tongue-machine." Each part, a taste bud, for example, is an important component of the overall design. Our ability to taste sweet things, for example, was part of nature's design in order to encourage our ancestors to eat ripe fruit

and other sweet-tasting foods. Our ability to taste bitter things is part of nature's way of discouraging our consumption of substances that might be poisonous. Working together, the many "mini-machines" within our taste preference system (which includes the tongue and our sense of smell) assist in guiding our behavior toward survival-successful ends.

We are built of literally thousands of these mini-machines "adaptations" which are the mechanisms that aid our survival or reproduction. This idea is not new to health professionals, as they clearly recognize that our eyes, ears, heart, and lungs are part of the overall "survival machine," our body.

However, few health professionals recognize that in addition to observable parts, adaptations also come in an altogether different form. Adaptations do not have to be physical structures, such as eyes or ears. They also can be in the form of behavioral tendencies, coded into our nervous systems, as part of our natural design. Such behavioral adaptations are every bit as crucial to our survival as are our eyes, heart, and lungs.

Behavioral adaptations

Consider your behavioral inclination toward a pesky mosquito drilling into your skin. Probably, you slap at the pest. Slapping at mosquitoes is an example of a behavioral adaptation. It is an exquisitely coordinated movement of muscles and sensory feedback, made possible by our natural design. Nature punishes us with unpleasant feelings if we can't or won't slap at the mosquito, and rewards us with a small feeling of relief when we do. This is not a learned, or taught, tendency. It is a genetically-mediated feature of the circuitry in our brains. All children, the world over, slap at mosquitoes automatically, a telltale sign of a naturally designed behavioral tendency. In other words, slapping at mosquitoes is an "adaptation."

Many behavioral characteristics and bodily responses are components of our natural design. Coughing, sneezing, vomiting, fever, and inflammation, while they may not be pleasant, are adaptations. They are sophisticated responses of the body, designed into our nature, in order to assist our health and healing. The artificial suppression of such adaptive mechanisms, such as suppressing a cough or a fever with medication or other means, is almost always a step away from health.

It is now well known that fever, inflammation, coughing, and vomiting are health-promoting adaptations that require judicious management. Among better-educated health professionals, it is understood that artificial suppression of these adaptive responses may

provide pain relief, but at the potential compromise of overall health. The wise professional will attempt to understand what is causing these adaptations to be activated, and to remove such causes, rather than merely attempting to suppress symptoms. But while fever, inflammation, and other symptoms are finally becoming recognized as adaptive processes, the importance of the loss of appetite, characteristic of many disease processes, is largely unappreciated.

A multi-faceted adaptation

As Herbert Shelton noted in his long out-of-print 1928 book Human Life: Its Philosophy and Laws, Fasting has its origins in the dim uncertainties of the long forgotten past when the first wounded animal found that it had no desire for food. In other words, fasting is an ancient adaptation. It is also a multi-faceted one, because it involves both physical and psychological adaptations.

Few health professionals are aware of the many, truly astonishing, physical adaptations that result from water-only fasting. Most believe that water-only fasting is simply "starving," and that little or no benefits result from such an experience.

In reality, water-only fasting is dynamic, complex, and involves many health-promoting processes. For example, studies have indicated that immune function is significantly enhanced during water-only fasting, an effect that few would suspect. There is also an enhanced mobilization and elimination of toxic products, including poisons such as PCP, dioxins, pesticide residues, and other pollutants. The evolutionary reasons for this benefit are uncertain. Probably, in the dim uncertainties of the long-forgotten past, life-threatening infections and exposure to naturally-occurring environmental toxins were serious threats to the survival of our ancestors. These threats may have resulted in the development of health-promoting adaptations, one of which was water-only fasting.

In addition to many documented physical adaptations associated with water-only fasting, there is also an obvious psychological one as well. Often when we are ill, we lose our appetite. Like many other animals, we don't feel much like eating when we get sick, and this is hardly an accident. It is clearly a component of our natural design, the psychological component of the fasting "machine." Like our tongues, the fasting process is multi-faceted, a "packet" of adaptations all working together. The natural adaptation of water-only fasting starts with a desire to refrain from eating, and results in many health-promoting automated processes. Few health professionals ever have considered that the lack of appetite that accompanies illness is actually a component of such a complex adaptive mechanism. As a

result, honoring this adaptive tendency is rarely encouraged. In fact, it is often actively discouraged.

An understandable error

When an unwell animal fasts, it is quietly fighting for its life. The lack of appetite is a component of a finely coordinated strategy of the body to restore health as quickly as possible. Rest is an additional, and integral, component of this strategy. Not only do sick animals often fast, they also rest while doing so. Fasting and resting help to assist the healing process. However, once an animal begins to recover, two marked behavioral changes occur. First, the animal becomes more active. Second, the hunger drive returns, and the animal begins to seek food and eat. Activity and eating are the visible signs of a creature returning to health.

It is hardly surprising, then, that humans have confused the connection between eating and the regaining of health. Observing that increased appetite and health go hand-in-hand after illness, many people have mistakenly assumed that an increase in food intake causes the regaining of health. In reality, they have it backwards. It is the increase in health that results in the reappearance of hunger! Sadly, this connection has been missed by most health professionals. This is not surprising, as other adaptations also have been misconstrued and mismanaged throughout history, including fever, inflammation, and vomiting. The natural desire to refrain from eating when ill is simply another example of a misunderstood adaptation.

A voluntary adaptation

If the natural desire for water-only fasting when ill were to become better respected, this would be a positive step. Instead of being force-fed chicken soup, people with a condition resulting in the need to fast would be managed quite differently. However, water-only fasting is an unusual adaptation in that it does not require the loss of appetite associated with acute illness. Fasting also can be undertaken voluntarily.

Unlike other health-promoting adaptations, such as fever or inflammation, a water-only fasting process can be started with merely a behavioral decision. As such, it is possible to invoke this multi-faceted healing process without the loss of desire for food. As you might imagine, few health professionals have ever considered this possibility, and they rarely have the slightest clue about the positive effects of such a strategy. Unless one suspected that fasting was a complex, multi-faceted healing adaptation, one would never choose to fast without a crisis involving a naturally-reduced hunger drive. However, this ancient

mechanism, designed by nature to assist healing processes during crises, also works well when we are not in a crisis.

Overcoming excesses

It is now recognized that, in the industrialized world, most diseases are due to dietary excesses, especially of animal products and processed foods (such as oils and refined sugar). It turns out that voluntary, water-only fasting is often magnificent in its ability to assist the body in healing from the consequences of these excesses.

Fasting results in weight loss, elimination of excess cholesterol, triglycerides, and uric acid, as well as accumulated environmental toxins. Often, growths and tumors associated with dietary excesses, such as fibroids and cysts, are reabsorbed. Inflammatory conditions, such as arthritis, colitis, asthma, and hepatitis, often are greatly improved or resolved. Many enzymatic functions of the liver and other organs, including the insulin-resistance characteristic of diabetes, can rapidly normalize. For most adult-onset diabetes patients, medications become unnecessary.

Hypertension, the leading cause of doctor visits and of prescription medication use in America, is almost always rapidly resolved during supervised water-only fasting. In over 250 cases of hypertension seen at the TrueNorth Health Center over the past 16 years, almost all were able to achieve a blood pressure level after fasting that eliminated the need for medication. Our ongoing research is beginning to provide explanations for these spectacular results.

Fasting also assists in an extremely important normalizing process, a process we call taste neuroadaptation. Many modern foods are not the normal foods of our species, they are foods that have been altered to create unnaturally intense taste responses. As a result, most of our modern foods are high in processed sugar, fat, and salt. Our taste buds adapt to these abnormal-but-appealing foodstuffs, making the consumption of whole natural foods less palatable by comparison. Water-only fasting helps to rapidly re-sensitize the palate, so that healthful foods can be fully enjoyed again. Of the many benefits of water-only fasting, this is, for many people, one of the most important.

Proper supervision vital

Supervision is an important component of a water-only fasting experience. During a fast, many powerful adaptive processes are put into motion, some with potentially unpleasant and/or disturbing characteristics. Clinical experience and laboratory data often are needed

to distinguish between a positive healing process being generated by the body, and a possible physiological compromise. For this reason, it is recommended that fasting only be undertaken under the supervision of a physician with appropriate training.

Hygienic physicians certified in fasting supervision by the International Association of Hygienic Physicians must hold a valid license as a primary care physician (M.D., D.C., D.O., or N.D.) and complete a six-month residency in fasting supervision at an approved facility. With appropriate training, a supervising physician can help ensure a safe and effective fasting experience.

Fasting, as defined by Hygienic physicians, is the complete abstinence from all substances except pure water in an environment of complete rest. The "complete rest" component of fasting is important because even moderate activity can double caloric usage and reduce the effectiveness of the fast. Clinical research has indicated that the detoxification process, as well as other important healing processes made possible by fasting, may be significantly compromised by excess activity. Resting is a critical component in ensuring that a fast is both a safe and effective experience.

The lost adaptation

At the TrueNorth Health Center, we describe water-only fasting as "the lost adaptation." While creatures all over the Earth routinely make use of this powerful healing strategy, they often must do so because they are so ill that they cannot successfully obtain food. Modern humans, in contrast, are rarely faced with this situation. Today, no matter how sick we get, even if we are lying in a hospital bed, food is brought by others up to our very mouths. And it is usually highly-stimulating food. The idea of fasting, even if we are inclined to do so, is strongly resisted. Well-meaning (but misguided) friends, relatives, and health professionals urge us to eat, so we can "get better."

Similarly, when we are not acutely ill, the idea of water-only fasting seems absurd. It goes against our ancient, natural programming, which encourages us to make sure we get plenty to eat now, because in our natural, ancestral environment there might not have been any food available again soon. Most people fear that if they fast for a few days, dire things will occur, or they believe that the average person can fast only a few days, perhaps a week. The concept of fasting for a week or two, or longer, for health benefits seems ridiculous to them. It also seems ridiculous to the typical health professional, unless they understand that fasting is an adaptation. It is amazing that such a powerful and useful adaptation is virtually unknown, as amazing as if we collectively decided to refrain from slapping mosquitoes. An

adaptation that facilitated the survival prospects of a great many of our ancestors has been very nearly "lost."

But times are changing. With the publication of Dr. Joel Fuhrman's recent book, Fasting and Eating for Health, a modern and thorough review of the benefits of fasting has been articulated. And at the TrueNorth Health Center in California, our nine staff doctors (with assistance from Cornell University scientists) have worked together to generate and publish scientifically credible research that documents the benefits of fasting.

It is our hope that our efforts will result in a greater awareness and appreciation of this remarkable process. The utility of fasting may then be widely found, both by health professionals and by the patients who will ultimately reap the benefits.