

Current Comments

To Fast or Not Too Much Fast. Part 1. The Claims for Fasting in the Popular Literature

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Most people, myself included, enjoy good food. But as I've indicated recently, love for certain foods can sometimes lead to overindulgence.¹ Like many Americans, I could easily have a serious weight problem. So I take keen interest in problems of nutrition and diet. Undoubtedly, part of this preoccupation with diet is also connected to my personal familiarity with ulcers.² While more recent studies would indicate that dietary habits play a negligible role in the etiology of peptic ulcers, there appears to be increasing evidence that our eating patterns play an important role in our susceptibility to disease.

A few years ago, for instance, we published an essay on vegetarianism and its impact on health.³ More recently, we covered food additives,⁴ caffeine,⁵ and lactose intolerance.⁶ Over the years, however, I have found that the best counteraction to indulging a predilection for ice cream and other foods is to fast. And in recent years, so many more people seem preoccupied with fasting that it struck me as a good subject for an essay and even a little personal research. So this week's essay will discuss the popular attitudes toward fasting, and next week's will cover the scientific data.

I've been familiar with fasting since childhood. My grandfather fasted regularly and lived to 85. (He also took a shot of whiskey each night at bedtime,

as was pointed out when we discussed the presumed nutritional benefits of alcohol.⁷) Grandpa's behavior was not really unusual. People have fasted since antiquity. The practice probably had its start as a purely pragmatic response to adverse environmental conditions.⁸ Such involuntary fasting is still with us today, but it is known by a more familiar, more terrible name: starvation. Ironically, in a world where too many people have no choice but to fast, voluntary fasting seems to be in vogue among the affluent. The roots of voluntary fasting, however, have little in common with the way it is practiced in modern societies.

Possibly among the first people to willingly deprive themselves of food were the religious ascetics. In fact, the ascetic roots of fasting are still to be found in its *Oxford English Dictionary* definition: "to abstain from food or restrict oneself to a meagre diet, either as a religious observance or as a ceremonial expression of grief."⁹ To this day, asceticism is still associated with fasting, as well as the denial of other instinctive urges and the renouncing of worldly goods and pleasures. Through such practices, the ascetic hopes to conquer the influences of the external, physical world and ultimately unite with the divine.¹⁰

More recently, however, fasting has become a tactic for the achievement of

political goals. This politicization of fasting is largely the result of the philosophy of the famous Indian leader, Mahatma Gandhi, for whom civil disobedience and fasting were not tactics, but a way of life—of conquering evil through love. By inviting rather than inflicting suffering, Gandhi hoped to move hardhearted rulers to pity and a realization of their mistakes.¹¹ Ireland has also been the site of political fasting, from Mayor of Cork Terence MacSwiney's death in a British prison after a 74-day hunger strike in 1920,¹² to the more recent headlines made by Irish prisoners fasting and dying in Belfast's Maze prison.

Neither religious ascetics nor political leaders, however, can lay sole claim to the practice of fasting anymore. Within the last few years, thousands of people in the US have undertaken fasts, many of them paying a generous fee for the privilege of doing so at any number of health retreats.¹³ The main purpose behind much of this fasting has been simply to lose weight. For anyone who has ever experienced the frustration of dieting, only to regain all the weight that was lost, fasting's credentials as a method of weight reduction can be almost irresistibly attractive.

For instance, in both scientific studies^{14,15} as well as the informal observations of fasting's devotees,¹⁶⁻¹⁹ the obese can expect a loss of as much as six pounds per day for the first few days. The moderately overweight may lose as much as three pounds per day. As the fast is extended, the rate of loss generally settles down to a steady one-half to three-quarters of a pound per day. Fasting's supporters maintain that hunger disappears after the first few days of fasting, and that there is no serious danger or discomfort involved for those who are in reasonably good health.¹⁶⁻¹⁹ In fact, fasting is said to be accompanied by a state of uncommon energy,

alertness, and even euphoria.¹⁶⁻¹⁹ While this may be generally true, not everyone agrees. But even fasting's devotees agree that unsupervised prolonged fasting can be dangerous.

Part of the resurgence of fasting in today's culture has little to do with the mere shedding of pounds. Many fasting enthusiasts are heirs to a movement that began in eighteenth-century Europe called "natural hygiene."⁸ Adherents of this movement believe that fasting can preserve health and prolong life. In the US, natural hygiene was popularized by the exhortations of many health practitioners, among them Sylvester Graham, for whom the graham cracker is named.^{8,20} Near the end of the nineteenth century, Graham traveled throughout the country preaching the gospel of dietary reform and healthful living.⁸

The goals and principles of the early natural hygienists are being furthered today by the American Natural Hygiene Society (ANHS), 698 Brooklawn Avenue, Bridgeford, Connecticut 06604, which was founded in 1949. The society's official membership numbers about 8,000 and is spread among some 30 formal chapters. However, Jo Willard, executive director, says that throughout the US, there are hundreds of informal local groups as well.²¹ This, together with the heavy sales of books published by the Natural Hygiene Press and the interest shown in the society's magazine, *Health Science*, published since 1978, attests to the popularity hygienic principles have found lately, even among those who do not formally think of themselves as natural hygienists.

Though natural hygienists reject most modern medical theories and therapies, many hygienic practices—such as getting plenty of rest, fresh air, and sunshine, and abstaining from coffee, liquor, tea, and cigarettes—actually come highly recommended by main-

stream health care experts. Natural hygienists go beyond orthodox medicine, however, when they advocate a vegetarian diet, the consumption of only "natural" foods that are unprocessed and free of chemical additives, drinking distilled water, and avoiding all drugs and injections.

Moreover, natural hygienists reject the idea that viruses and bacteria can cause disease. Instead, they claim that toxins are responsible for both sickness and aging.¹⁶⁻¹⁹ These toxins include not only the body's own natural waste products, but the thousands of chemicals contaminating our bodies, from pesticides and pollutants to food additives.¹⁶⁻¹⁹ Fasting supposedly provides the body a period of physical and psychological rest, giving it the opportunity to cleanse, heal, and rejuvenate itself.^{8,16-19}

The mechanism by which fasting benefits the body, according to the popular fasting literature, is intimately connected with the body's natural reactions to the accumulation of toxins.¹⁶⁻¹⁹ According to many fasting enthusiasts, eating—especially processed foods laden with chemicals—and the consumption of drugs, alcohol, and tobacco smoke overload the body's ability to eliminate foreign material, and even its own wastes.¹⁶⁻¹⁹ Toxemia occurs when wastes are dumped into the body faster than it can effectively deal with them. This condition causes all the outward signs of illness, from vague aches and pains, fatigue, and a loss of alertness to serious disease and even death.¹⁶⁻¹⁹

As toxins accumulate, the body "wants" to reject food—not only because food is a source of toxins, but because in doing so, the body redirects the considerable energy it normally uses in digestion to the elimination of stored toxins.¹⁶⁻¹⁹ During this fast which the body enforces upon itself, it selectively metabolizes its old, worn-out, defective, and damaged tissues, as opposed to

healthy or vital cells. The result is that stored toxins are released into the bloodstream and excreted.¹⁶⁻¹⁹

No special curative powers are attributed to the fast itself, stresses Herbert M. Shelton, who managed his own fasting institution for over 50 years.¹⁹ Instead, it is the body that does the healing; the fast merely gives it the opportunity to do so. A partial listing of the diseases that Shelton states are remediable through fasting in his book *Fasting Can Save Your Life* includes: smallpox, typhoid and typhus fever, pneumonia, diphtheria, colitis, the common cold, multiple sclerosis, asthma, arthritis, neuritis, lumbago, sciatica, abscesses, peptic ulcers, migraine, hay fever, high blood pressure, psoriasis, eczema, prostatic enlargement, gonorrhea, paralysis agitans (Parkinson's disease), gallstones, breast tumors, and sterility in women.¹⁹ To this list, Alan Cott, author of *Fasting as a Way of Life*, adds: acne, constipation, varicose veins, anemia, rheumatism, stress, and nervous exhaustion.¹⁸ Shelton warns, however, that a single fast, no matter what its duration, may not be totally effective against a long-standing condition. Moreover, once the condition has been remedied, it is important not to return to one's previous life-style, but to follow a new healthy mode of living.¹⁹

Perhaps even more remarkable than fasting's presumed efficacy against disease, however, are the claims its supporters make for its rejuvenating power. According to fasting enthusiasts, stress is one of the major factors in aging. Cutting down on the "stresses and abuses" inflicted on the cells will slow the aging process.¹⁷ Stresses and abuses refers to toxins,¹⁷ and in support of this idea, many authors on fasting mention the work of Alexis Carrel (1873-1944), a French surgeon, sociologist, and biologist who received the 1912 Nobel prize for his work on suturing blood vessels.²²

Fasting's devotees claim Carrel's pioneering work with cell cultures *in vitro* showed that waste materials and toxins are the causes of cellular aging.^{17,19} Fasting enthusiasts also mention that scientific studies restricting the diet of rats to a level that is "close to fasting," but still nutritious enough to keep the rats alive, have shown that the rats live longer and mature at a slower rate when they eat less.¹⁷ Fasting's supporters conclude that human beings have only to fast periodically and cut out stressful foods, such as meat and dairy products, in order to attain a longer life span and improved health.^{17,19}

During a fast, according to many fasting enthusiasts, the outward signs that the internal cleansing and rejuvenating processes are taking place may include the following: foul-smelling breath and urine, pasty teeth, a coated tongue, nausea, vomiting, irritability, sleeplessness, weakness, aches and pains, severe headache, skin eruptions, dizziness, fainting, palpitations of the heart, and diarrhea.¹⁹ Fasting's defenders emphasize, however, that the appearance of these symptoms is no cause for alarm or breaking the fast;^{17,19} they are not adverse reactions or side effects, but rather, they may be compared to the symptoms an addict shows during withdrawal from drugs.^{17,19} Moreover, not all fasters suffer from such developments—many, in fact, enjoy the experience immensely, as the testimonials in the popular fasting literature show.^{17,19,23}

The popular fasting literature itself is somewhat difficult to characterize, since it often deals with subjects ranging far beyond just fasting. This is especially true of the natural hygienic literature. For instance, besides the popular *Fasting Can Save Your Life*,¹⁹ Shelton has also written *Food Combining Made Easy*,²⁴ explaining which foods can and cannot be eaten together at the same

meal for optimum nutrition, and how the inefficient digestion of incompatible foods produces toxins. Another hygienic author, Hannah Allen, traces the development of cancer through various stages of toxemia, and considers both the prevention and removal of the cause of cancer, as well as hygienic care and the applicability of fasting, in her book *Are You a Candidate for Cancer?*²⁵ In *Toxemia Explained*,²⁶ John H. Tilden summarizes the role of enervation and self-generated toxemia in disease. Judith H. Dobrzynski surveys the various claims made both for and against fasting in *Fasting: A Way to Well-Being*,⁸ and identifies and describes a number of fasting institutions in the US. To provide some additional authenticity to this essay, I recently visited one of those institutions.

The Pawling Health Manor, Box 401, Hyde Park, New York 12538, is run by Joy and Robert Gross. The manor is open throughout the year and is devoted to a philosophy of natural, healthful living. The program includes no weight-reducing gadgets or gimmicks, but rather a regimen of sunshine, light exercise, fresh air, natural foods, and fasting. Smoking is prohibited, and according to some accounts, accommodations range from the spartan to the deluxe, depending upon your outlook. There is a simple outdoor solarium for nude sunbathing, a 20' × 40' pool, and a gymnasium. The minimum stay is one week, with costs ranging upward of \$300. My son Stefan came along. We shared a perfectly adequate motel-like room with a private bath. Perhaps these accommodations were considered spartan by one reporter¹³ because the only telephone available is in a public phone booth.

Joy Gross is the author of the book *The 30-Day Way to a Born-Again Body*,¹⁷ in which she describes the

regimen of diet used at the manor after fasts are broken. This diet increases the intake of natural carbohydrates (organically grown fresh fruits and vegetables) and reduces the daily intake of protein. Protein is provided by legumes, nuts, and seeds, supplying the minimum level required for the maintenance of health. The diet eliminates meat, dairy products, bleached flour, sugar, and chemical additives. Since the need for protein varies from individual to individual, the book contains a "protein counter" that tells you how much protein to eat every day. The book also provides information on how much protein various foods contain. However, in addition to a description of a basically vegetarian diet, Joy Gross's book also provides many good recipes, as well as advice on how to pick good-quality fruits and vegetables. It also discusses the advantages of fasting, sunbathing, correct breathing, and exercising.

There are a number of serious objections to the popular view of fasting outlined here, however. Chief among them is the fact that, though some of the practices of fasting's advocates are just good common sense, there is no established scientific validity to any of their more spectacular claims.²⁷ Many popular fasting publications completely lack conventional scientific documentation. Even when they include references, however, the citations leave much to be desired.

For instance, although *Fasting as a Way of Life*¹⁸ includes a bibliography, the text of the book is not footnoted, making it impossible to match up statements in the text with the items cited. Joy Gross told me this is often the fault of the publishers: most publishers of books for popular consumption have a prejudice against footnotes. They claim this turns off the average reader. Nevertheless, you would think

that at least one "scientific" work on fasting would be forthcoming, considering the interest in the subject. Most of the publications cited by fasting enthusiasts (when they cite anything) are not primary research journals, but popular articles in magazines. When these authors *do* cite a journal article that can be checked, we found that the work is often obscure, discredited, or has been misinterpreted by the author.

As far as the scientific community is concerned, the credibility of the fasting community is weakened by its general nonempiricism, disparagement of medicine, and vague, incomplete references. Science writer Jane E. Brody warns readers in a *New York Times* article that the following are hallmarks of nutritional misinformation: the use of testimonials and "front" titles; charges that medical science refuses to investigate certain claims; statements that most disease is due to faulty diet; and claims that processing "poisons" foods.²⁸ Incidentally, a position paper published by the American Dietetic Association in 1975 stresses that additives do not poison food, nor are organically grown foods necessarily superior to foods grown using standard fertilizers and pesticides.²⁹

Even if all the claims of fasting enthusiasts were true, nothing is accomplished by the creation of an adversary relationship between fasting's champions and science. Fasting's devotees would do well to become far more scientific in their methods. (In this respect they have a problem not unlike that of chiropractors.³⁰) They might also benefit if the ANHS or some other popular fasting organization could sponsor research at respected institutions. It is true that the National Institutes of Health has sponsored research to study the effects of fasting on obesity, diabetes, and the production of certain hormones and en-

zymes. But the scientific community has not looked into some of the more spectacular claims of healing and rejuvenation that hygienists and fasting's other supporters attribute to it.

Willard believes the reason that science ignores natural hygiene is that the medical establishment is threatened by the simplicity of fasting as therapy. She notes that there is not much money to be made in prescribing a fast, as opposed to dispensing drugs or using high technology therapies. "People are deprived of knowledge," she asserts, "because orthodox medicine can go to the government for research grants. But hygienic practitioners never could. Fasting has had to exist as an underground movement."³¹

Fasting's supporters legitimately claim that scientific investigations of fasting may not really be studies of fasting at all—at least not in the sense that adherents use the term.³² Scientific studies, for instance, sometimes allow their subjects vitamin supplements and

electrolyte replacement,³³⁻³⁵ fruit juices,³⁶ tea,^{37,38} and in one case, even as much as 180 calories a day in coffee and low-calorie soft drinks.³⁹ Such studies may or may not be relevant if you are trying to prove the effects of a fasting diet limited to distilled water. While the subject of fasting has not been completely ignored by science, it is noteworthy that only one significant or active research front—Effects of Fasting on Insulin Action in Adipocytes—directly relevant to fasting could be identified in the *ISI/BIOMED*™ system. Nevertheless, one can identify in the scientific literature many isolated papers which, taken together, have important things to say about various aspects of fasting. These will be discussed in next week's essay.

* * * * *

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REFERENCES

1. **Garfield E.** All about ice cream; or, confessions of an ice cream addict. *Current Contents* (6):5-10, 9 February 1981.
2. -----, All about ulcers, antacids, and how little we know. *Current Contents* (45):5-12, 10 November 1980.
3. -----, The vegetarian alternative. *Current Contents* (11):5-13, 14 March 1977.*
4. -----, Toward ending the confusion surrounding food additives: the case for better labeling. *Current Contents* (24):5-17, 11 June 1979.
5. -----, Should we kick the caffeine habit? *Current Contents* (7):5-9, 18 February 1980.
6. -----, The worldwide problem of lactose intolerance. *Current Contents* (49):5-8, 8 December 1980.
7. -----, Alcohol: are the benefits worth the risks? *Current Contents* (15):5-13, 13 April 1981.
8. **Dobrzynski J H.** *Fasting: a way to well-being.* New York: Sovereign Books, 1979. 120 p.
9. **Murray J A H, Bradley H, Craigle W A & Onions C T,** eds. *The Oxford English dictionary.* Oxford: Clarendon Press, 1961. Vol. 4. p. 89.
10. **Hardman O.** *The ideals of asceticism: an essay in the comparative study of religion.* (Thesis). University of London, 1924.
11. **Datta D M.** *The philosophy of Mahatma Gandhi.* Madison: University of Wisconsin Press, 1953. 154 p.
12. **Young V R & Scrimshaw N S.** The physiology of starvation. *Sci. Amer.* 225(4):14-21, October 1971.

13. **Tanne J H.** ...And if you're watching your budget.
New York 14(20):39-43, 18 May 1981.
14. **Bloom W L.** Fasting as an introduction to the treatment of obesity.
Metabolism 8:214-20, 1959.
15. **Drenick E J, Swendseld M E, Bland W H & Tuttle S G.** Prolonged starvation as treatment for severe obesity. *J. Amer. Med. Assn.* 187(2):100-5, 11 January 1964.
16. **De Vries A.** *Therapeutic fasting.* Los Angeles: Chandler Book, 1963. 82 p.
17. **Gross J.** *The 30-day way to a born-again body.*
New York: Rawson, Wade, 1978. 262 p.
18. **Cott A.** *Fasting as a way of life.* New York: Bantam Books, 1977. 130 p.
19. **Shelton H M.** *Fasting can save your life.* Chicago: Natural Hygiene Press, 1978. 222 p.
20. **Burns D, ed.** *The greatest health discovery: natural hygiene and its evolution, past, present and future.* Chicago: Natural Hygiene Press, 1972. 241 p.
21. **Willard J.** Telephone communication. 1 May 1981.
22. Carrel, Alexis. *Encyclopaedia Britannica. Micropaedia.*
Chicago: H.H. Benton, 1974. Vol. 2. p. 589.
23. **Goldstein J.** *Triumph over disease by fasting and natural diet.*
New York: Arco Publishing, 1977. 245 p.
24. **Shelton H M.** *Food combining made easy.*
San Antonio, TX: Shelton's Health School, 1976. 71 p.
25. **Allen H.** *Are you a candidate for cancer?* Chicago: Natural Hygiene Press, 1974. 27 p.
26. **Tilden J H.** *Toxemia explained.* New Canaan, CT: Keats Publishing, 1976. 132 p.
27. **Scrimshaw N S.** Telephone communication. 7 August 1981.
28. **Brody J E.** Personal health: the dangers of nutritional misinformation.
NY Times 25 March 1981, p. C19.
29. **American Dietetic Association.** Position paper on food and nutrition misinformation on selected topics. *J. Amer. Diet. Ass.* 66:277-80, 1975.
30. **Garfield E.** Chiropractic: still controversial after nearly 100 years.
Current Contents (27):5-13, 3 July 1978.*
31. **Willard J.** Telephone communication. 13 October 1981.
32. **Gross J.** Telephone communication. 26 March 1981.
33. **Suzuki J, Yamauchi Y, Horikawa M & Yamagata S.** Fasting therapy for psychosomatic diseases with special reference to its indication and therapeutic mechanism. *Tohoku J. Exp. Med.* 118(suppl.):245-59, 1976.
34. **Yamamoto H, Suzuki J & Yamauchi Y.** Psychophysiological study on fasting therapy. *Psychother. Psychosom.* 32:229-40, 1979.
35. **Rooth G & Carlström S.** Therapeutic fasting. *Acta Med. Scand.* 187:455-63, 1970.
36. **Spencer I O B.** Death during therapeutic starvation for obesity.
Lancet 1:1288-90, 1968.
37. **Boehme D H.** Preplanned fasting in the treatment of mental disease: survey of current Soviet literature. *Schizophrenia Bull.* 3:288-96, 1977.
38. **Harrison M T & Harden R M.** The long-term value of fasting in the treatment of obesity. *Lancet* 2:1340-2, 1966.
39. **Sletten I W, Viamonte G, Hughes D D & Korol B.** Total fasting in psychiatric subjects: psychological, physiological and biochemical changes.
Can. Psychiat. Ass. J. 12:553-8, 1967.

*Reprinted in: **Garfield E.** *Essays of an information scientist.*
Philadelphia: ISI Press, 1980. 3 vols.