Alfalfa Sprout Ideology

Some Research on Raw-Foods Diet Theory

Verne Varona

Of all current popular diets—from the Blood Type, South Beach, Macrobiotic, Atkins and Raw Food—none seems to be more rife with idealism and extreme dogmatism as the Raw Foodists. Well, maybe some hard-core macrobiotic followers might tend to get carried away, but in every ideology you’re bound to find idealism. This article will attempt to add practical reality to many raw-food claims—not for the purpose of devaluing it—but to offer a balanced view of its merits as well as its fallacies.

Practical logic dictates that we should eat what seems agreeable and in a form that lends to comfortable digestion. Since the advent of fire, when someone perhaps threw a carcass into a fire and discovered that the meat tasted better and provided additional warmth, we’ve applied heat to our foods. Obviously, some foods, such as beans, rhubarb, squash, or rice are better when cooked than when raw.

To someone with irritable bowel syndrome (IBS), raw food might be an invitation to pain, since foods that have not had their roughage softened by the element of heat can create digestive discomfort. For someone anemic, liberating the nutrition from deep within the vegetable cellulose fibers requires heat. Without this release eating raw food over a period of time could be a cause of vitamin deficiency. Older individuals often find raw food equally irritating; so, the one-size-fits-all paradigm of salad recommendations doesn’t apply across the board.

On the other hand, foods that are heavily fried, broiled, or intensely salted are best avoided. Dietary styles of cooking should be varied for textural appetite and for effective nutritional absorption. For maximized digestion, vegetables can be added to soups, or stews; they can be broiled, steamed, quick boiled (blanched), water-fried (an Asians culinary technique), pressed, sautéed, or finely chopped raw.

What Bugs Bunny Never Knew...

Researchers at the University of Arkansas in Fayetteville heated carrots with and without the skin and then stored them at 40 degrees centigrade (104 degrees Fahrenheit) for 4 weeks, measuring antioxidant levels and comparing them with the levels found in raw carrots. They found that the antioxidant levels in carrots that were cooked and pureed were more than three-times higher than levels measured in the raw varieties. In addition, antioxidant levels had increased by more than 34 percent immediately after cooking.

The researchers theorized that heating softened the carrot’s external tissue, allowing phenolics attached to the cell wall to be released. They also found that keeping the outer skin on...
the carrots also boosted antioxidant activity slightly. The study’s lead author, Luke Howard, told Reuters Health that, “Many consumers think that fresh vegetables are always superior in nutritional quality than processed vegetables, but this does not appear to be true, particularly for carrots.”

**The Myth of Lost Nutrients**

Recently, a team of five researchers from two universities, Anapoli and Parma, studied what happened to the nutritional content of carrots, broccoli, and zucchini (known as courgettes in Britain) when the foods were steamed, boiled, or fried. They found that cooking these vegetables with water, by steaming or boiling, retains their antioxidants better than frying.

All three ways of cooking were responsible for increased antioxidant levels. The researchers theorized that this is due to the “softening of the vegetable cell matrix where valuable nutritional compounds are bound.” Steaming broccoli increases its glucosinolates, which may help fight cancer, compared with consuming raw broccoli.

Unfortunately, sloppy science prevails in the raw-food movement. The more extreme advocates for a raw-food diet mistakenly conclude—and in black and white tones—that all cooked foods are bad. This is simply not true. It is true that food cooked at extremely high temperatures, especially when fried or barbecued, form toxic compounds while many nutrients diminish. It is also true that overcooking can reduce some of the important water-soluble vitamins such as vitamin C and vitamin B complex. Overcooking can destroy some enzymes that function as phytochemical nutrients in our body.

However, cooking in many cases of food preparation is required for better absorption and to provide more nutrition. Minimal amounts of nutrients are reduced by common forms of cooking such as in the making of soup. Some nutrients are made more absorbable. Other nutrients are unavailable if the vegetables are eaten raw.

Cooking can destroy some of the harmful anti-nutrients that bind intestinal minerals and block the utilization of nutrients. The very destruction of these anti-nutrients actually increases digestive absorption. Steaming breaks down cellulose of plant fibers, altering the plants’ cell structures so less gut enzymes are required to digest food, instead of more.

The traditional act of cooking also significantly improves the digestibility/bioavailability of starchy foods such as tubers, potatoes, yams, squashes, grains, and legumes.”

Food that is steamed or made as soup, requires a fixed temperature of 100 degrees Celsius (or 212 degrees Fahrenheit), as a minimum to boil water. Such moisture-based cooking keeps food from browning and forming toxic acrylamides.

Acrylamides have been known to cause genetic mutations, leading to a wide range of cancers in lab animals, including breast cancer and uterine cancer. Most acrylamides in food is formed when a natural amino acid called asparagine reacts with certain naturally occurring sugars such as glucose. However, this only occurs when the cooking temperature is sufficiently high—a temperature that varies depending on the properties of the product and the method of cooking.

These rock stars of heat-inspired toxins are not simply formed with steaming or quick boiling. They are specifically formed with dry cooking such as baking, grilling, or barbecueing, as well as with high heat deep-frying.

**Enzyme Loss Just Ain’t So...**

A dubious contention from hard-core raw-food propaganda centers on the need for enzymes and the claim that cooking heat destroys valuable enzymes. The fallacy that’s promoted here is that the fragile heat-sensitive enzymes held within the plants we consume catalyze chemical reactions that occur in humans and aid in food
digestion.

It is well known that plant foods do not supply enzymes that aid in their digestion when consumed by animals. Cooking sometimes alters the plant cell structure so that the nutrients become more accessible to our own body’s digestive enzymes such as by gelatinizing starch or by destroying substances that inhibit enzyme action. As a result, in many cases, cooked food actually requires fewer enzymes for digestion than raw food.

The raw-food notion that our body has a limited enzyme potential and therefore requires a large part of our diets to be uncooked is, according to much research, idealistic fiction. Digestive enzymes in food are exactly how they’re described: a supportive step for digestion. Naturally, enzymes can help, whether they’re inside or outside the body. Examples of enzyme activity occurring outside the body are the ripening of fruits, sprouting of grains and seeds, pickling, fermented products such as miso and soy sauce, or the aging of meat. These are forms of external food processing that numerous cultures have practiced for thousands of years to naturally improve digestion. Cooking can be considered one of the first aspects of digestion in this regard.

**THE HALLMARK OF TRUE HEALTH**

As the axiom goes, all extremes are toxic, which is why the hallmark of health has always been moderation—especially when it comes to cooking.

From a Traditional Chinese Medicine (TCM) point of view, cooking is an extension of digestion, allowing us to take large amounts of food and through a variety of mild cooking styles, condensing this matter into concentrated nutrition. Cooking also provides us with adaptability, provides warmth in colder climates, and offers an internal coolness in warmer climates and by the use of raw preparations. In fact, this is a natural progression of food preparation climatically throughout the world.

Often, people who have eaten large volumes of animal protein and who have relied on fast foods, do quite well including a large part of their vegetable diet as raw, as they reduce meats, fats, and sugars. This in its own extreme scenario is a form of balance—at least temporarily.

Conversely, I’ve seen a number of raw-food clients who were either anemic, listless, or suffered from poor sleep and loss of libido suddenly do well by including a bit of animal protein and/or more cooked foods. This improvement prompts the assumption that the hallmark of health is indeed moderation.

Some raw, well-chewed vegetable dishes can enhance the palate of almost any healthy individual, while those who feel weak from a raw approach may do well to include increasing amounts and varieties of cooked foods.

**WHEN ‘MY WAY OR THE HIGHWAY’ KEEPS YOU STRANDED**

Just as there is no one degenerative condition that we all suffer, there seems to be no one exact way of eating that is universally recommended for everyone. Even the notion of such an idea smacks of idealism.

Some people have a tolerance for ample portions of whole grain; others cannot assimilate large volumes of whole grain. Some research on grains points a finger at numerous acids held within the covering of brown rice. Some of these acids can be reduced with soaking, adding salt in the cooking, and through thorough chewing. So, sometimes initial recommendations for whole grains need to be individualized and offered in a gradient amount. The same goes for vegetable styles of cooking.

Ultimately cooking styles help us balance our food groups and add texture, taste, and color variety. However, the final arbitrator is experience, and not theory—no matter how good it sounds.

**Verne Varona**, a practitioner and teacher of macrobiotic principles since 1970, is the author of Nature’s Cancer-Fighting Foods (Avery/Penguin Books, 2001), now in its 12th printing. His new book, Macrobiotics for Dummies, from the popular Wiley Publications “Dummie” series, is due soon. He is currently involved in feature film production through his company, Exceptional Films—and he never met a raw carrot he didn’t like...