JON BARRON SPECIAL REPORT

The Raw Food Diet

An Inside Look At What’s Not Cooking In The Kitchen

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My interest in exploring raw food came to me when I connected with Kevin Gianni of Renegade Health while we were attending the same expo. Kevin is one of the leaders of the raw food movement in the United States and is someone I know fairly well having interviewed with him on his Internet radio show. During our chat, one of the things that became obvious is that there is a great deal of confusion as to what actually defines raw food and how to incorporate it into your diet. As Kevin pointed out, everyone who comes to his site is into the "idea" of raw food (that's what the site promotes), but he estimated only about 30% of his visitors actually incorporate raw foods to any degree in their diets.
I think the problem is that people do not understand the nuances of raw versus cooked. It's not as simple as: do you cook a vegetable or eat it raw? In fact, it goes far beyond vegetables and salads; you need to consider the questions of raw meat, raw fish, and raw dairy for example. And then there are the trade-offs. Cooking enhances some nutrients – others are destroyed. When evaluating the issue of raw foods, you need to consider the effect of cooking or not cooking on things such as:

- Pathogens
- Beneficial bacteria
- Nutrients
- Enzymes
- Denaturing of proteins
- Digestibility and assimilation
- Life force

And those are exactly the questions we're going to consider in this alternative health newsletter. My goal is not to teach you how to eat a raw food diet. There are plenty of books that can do that. But rather, to explore the pros and cons of the issue so you can make a decision for yourself as to whether or not it makes sense for you to expand the role of raw foods in your own diet.

**What Do We Mean By a Raw Food Diet?**

If 70-100% of your diet consists of uncooked, unprocessed organic foods, then you are considered to be on a raw food diet. Raw
foodists, as they are known, generally believe that the greater the percentage of raw food in your diet, the greater the health benefits you will receive. As it turns out, that last statement may be open to debate.

Many people confuse raw food diets with vegetarian diets. There is no connection -- other than the fact that the majority of raw foodists are also vegetarian. But other raw foodists eat a diet consisting largely of fatty meats, organ meats, and dairy. In any case, as I mentioned earlier, the health benefits of a raw food diet are more nuanced than "raw food good," "cooked food bad." In the same way that a vegetarian diet is not automatically healthy, neither is a raw food diet. Think veggie burgers or a night out at an Indian restaurant (tasty, but not necessarily that healthy). Vegetarian meals can easily be built from nothing but heavily oiled, cooked, stodgy, high fat, high glycemic, nutritionally dead food. Even a pure vegan diet is no guarantee. Likewise raw food diets are not automatically healthy, although they do tend to be of a higher order than diets that are merely vegetarian.

With that said, let's now explore some of the key issues that define the health giving benefits of a raw food diet.

**Pathogens and Raw Food**

Certainly, one of the key issues that must be addressed when talking about raw food diets is that of pathogens. We are still witnessing the fallout from the latest salmonella scare involving raw peanuts and
peanut butter. And who can forget the rapid fire organic spinach, carrot juice, and lettuce scares of 2006? Or what about the discovery in the late ‘80s that eggs no longer needed to be cracked to be contaminated -- that contamination could actually occur during ovulation, so that eggs were contaminated from the inside out? And who can forget the USDA’s requirement as stated in the Federal Register that all almonds be pasteurized to protect against salmonella outbreaks?

No, faced with this onslaught of horror stories, prodding from the FDA, and industry campaigns promoting the virtues of food irradiation, only an insane person would still want to eat raw food. Or not.

In truth, the issue of food contamination and the pathogenic dangers of eating raw foods are hardly as cut and dried as the press would have you believe. In fact, we're not just talking about raw veggies. It's quite possible to eat daily amounts of raw meats, fish and dairy, and not suffer any bacterial problems. People are doing it. Aajonus Vonderplanitz, author of Primal Diet, promotes a total raw food diet consisting of fatty meats, organ meats, dairy, honey, with minimal fruit and vegetable juices -- again, all raw. Thousands of people worldwide follow his diet. How do they not get sick?
According to Vonderplanitz, pathogens are always all around us and completely unavoidable. Zero exposure to "pathogens," then, is impossible because they are ubiquitous. But even more important, it is neither desirable nor healthy to avoid them. Yes, you read that correctly. Vonderplanitz theorizes that eating a diet rich in raw foods, even if teeming with bacteria is eminently healthy. As proof, he points to societies that consume high-bacteria foods as remedies and for disease-prevention such as the Chinese who eat rotten eggs and the Eskimos who eat rotten fish. In addition, he points to the 20,000 people, give or take, who follow his diet with great results and virtually no food poisoning.

At the risk of contradicting Aajonus, I'm not sure I buy the argument he proposes, fully. On the other hand, I totally accept the fact that raw diets provide a number of benefits that in most cases overwhelmingly outweigh the risks. In fact, in one important way, not consuming raw foods might put your health at great risk. Consider that one of the primary requirements of the immune system is that it be constantly exposed to low levels of pathogens so it can be "trained" to resist serious onslaughts of those same pathogens. Without that continual training, your immune system has no memory of pathogens and cannot respond efficiently to any threats. In other words, one of the primary benefits of exposure to low levels of pathogens in raw foods is that it enables the body to resist more serious exposure to pathogens that might come at a later date. And without that continual training, your body is far more susceptible to being overwhelmed
when it is eventually exposed to salmonella, E. coli, listeria, etc. in tainted food. The bottom line is that by continually trying to minimize exposure to pathogens in food, we may be making ourselves more vulnerable to them when ultimately exposed to them.

As a side note, even while acknowledging the health benefits many people have received on it, I have a problem with Aajonus' Primal Diet. Yes, it's hard to argue with the dramatic improvement in health that people notice so quickly on his diet. My concern is that a diet that relies so heavily on meats, organ meats, and dairy (even if raw) is going to be highly acid forming and ultimately force the body's pH downward. And in fact, Aajonus cites the Eskimo diet as proof of the efficacy of the Primal Diet. And yes, Eskimos on their traditional diet have almost no cardiovascular disease and no food poisoning, but what they do have is one of the highest incidences of osteoporosis in the world -- a direct result of their high acid forming diet. When it comes to raw food diets, I much prefer that the raw food component tend more to the vegan than the omnivore.

**Beneficial Bacteria and Raw Food**
At one time, we were constantly exposed to beneficial bacteria. Fermented foods such as sauerkraut, aged beef, and real yogurt were a regular part of our diets. (Thanks to modern food processing, not any more.) But even more important, we were constantly exposed to the beneficial soil based bacteria that came along with our freshly harvested fruits and vegetables. Think about how many bacteria
tagged along with that carrot you pulled from the ground, even after rinsing the dirt off -- or that strawberry you plucked fresh off the plant and popped right into your mouth. Nowadays, health laws require those same carrots and berries to be washed in chlorinated water after harvesting to remove all bacteria. And if any do survive the chlorine bath, they are destroyed by the heat involved in processing and cooking.

Organic raw foods -- if you grow them yourself -- still come with their beneficial bacteria. Consider that one more reason, along with the bad economy, to plant a victory garden.

**Raw Foods and Enzymes**
I've covered the issue of digestive enzymes many times before. Processing and cooking destroy enzymes in food. (Man is the only animal that cooks his food.) In fact, any sustained heat of approximately 118-129 degrees F (48-54 C) destroys virtually all enzymes. This means that, for most of us, the food entering our stomachs is devoid of enzymes. Why is this important? Because enzyme rich foods actually "predigest" in your stomach through the action of their own enzymes in a process called autolytic digestion. Before stomach acid enters the process, you can actually break down as much as 75% of your meal. Without that "autolytic" digestion, you force the body to compensate by over producing stomach acid and digestive enzymes in the pancreas in an attempt to break down the "dead" food.
The bottom line is that eating a diet of cooked and processed food puts incredible stress on the body -- particularly on the pancreas since it has to produce massive quantities of digestive enzymes since they did not come with the food itself. The less digestion that takes place before food reaches the small intestine, the greater the stress placed on the endocrine system. Is it any wonder that the incidence of diabetes is exploding in the developed world? If your diet consists of predominantly cooked and processed foods, then supplemental digestive enzymes are the "sine qua non" of minimal good health. Eating a predominantly raw food diet, on the other hand, takes stress off the pancreas (and the entire body) by providing the enzymes
required for digestion. It is one of the primary advantages of a raw food diet.

**Heat Denatures Proteins**

Another problem with cooked food is that heating proteins denatures them. The kinetic energy created by heat causes protein molecules to vibrate so rapidly and violently that their bonds are disrupted. Specifically, the denaturation of protein refers to the disruption and destruction of both the secondary and tertiary structures of the protein in question. Denaturation does not break the peptide bonds of the constituent amino acids, but it does disrupt the normal alpha-helix and beta sheets in large proteins, causing them to uncoil and restructure in random shapes.

An example of protein denaturation can be seen when cooking eggs -- the proteins coagulate during cooking. Other foods too are cooked to deliberately denature the proteins to break them down and make it easier for enzymes to digest them. This is true of both meats and grains. Cooking makes them easier to digest -- which may or may not be a benefit as we will see in a moment. As a side note, medical supplies and instruments are sterilized by heating to denature proteins in bacteria, thus breaking down the structure of the bacteria and destroying them.

So, is denaturation good or bad?
And the answer is: it depends. There are two potential problems with denaturation. First, in some cases as we described above, denaturation makes complex proteins more digestible by breaking them down into smaller more easily digested chains. But in other cases, those random chains can present severe allergy problems and/or utilization problems. Dairy proteins are a prime example. In the original form, although consisting of large complex molecules such as in breast milk, they are easily handled by the human body. But denature those same dairy proteins, as in pasteurized milk or high heat whey processing, and you can produce protein structures that present severe allergy problems. Another aspect of this same problem can be seen in animal studies that have shown that the higher the percentage of denatured whey proteins in a final product, the more animal growth is negatively affected.

But there is another problem with the denaturation of protein -- and that happens when it actually works well and makes food more digestible. As we shall now see, this is a two edged sword. Cooking both degrades and improves nutrition.

Most people are aware that cooking destroys nutrients. For example, heat breaks down all of the B vitamins, vitamin C, and all of the fatty acids -- either killing their nutritional value as with the vitamins, or creating harmful rancid variations as with the fats. But surprise, cooking actually enhances the availability of some nutrients. The lycopene in tomatoes, for example, becomes more bioavailable when heated -- which is why nutritionists recommend tomato sauce over
raw tomatoes when it comes to lycopene. And steaming broccoli actually increases its content of glucosinolates, a group of plant compounds known for their cancer-fighting abilities. In fact, a study published in the *Journal of Agricultural and Food Chemistry* concluded that cooking in the right manner promoted the release of antioxidant compounds from the vegetable matrix that held them and actually caused new, potentially beneficial, antioxidant compounds to form. Moreover, the study found that cooking softened the fiber matrix of the vegetables in question and likely increased the extractability of those nutrients from the vegetables and even contributed to their conversion into more active forms.

Then again, it was an industry sponsored study and appeared in an industry sponsored journal. For now, then, let's just say that although cooking may enhance some nutrients, it definitely degrades others -- thus the need to incorporate more raw foods in your diet.

**Cooking Improves Digestibility – Whoops…**

*The Economist* recently ran an article on the evolutionary role of cooking. According to Dr. Richard Wrangham, of Harvard University, cooking alters food in three important ways.

- It breaks starch molecules into more digestible fragments.
- It "denatures" protein molecules, so that their
amino-acid chains unfold and digestive enzymes can attack them more easily.

• And heat physically softens food. That makes it easier to digest, so even though the stuff is no more calorific, the body requires fewer calories to break it down.

This means that in the stomach and small intestine, where it can be absorbed, cooking increases the share of food digested from 50% to 95%. This is supported by a study in which rats fed on softer pellets (similar to what happens to food after you cook it) weighed 30% more after 26 weeks than rats fed the same weight of standard pellets. The difference was because the rats expended less energy digesting the softer pellets. Think about this for a moment. Making food more digestible (as in cooking) increases the body weight of rats by an astounding 30% in as little as 26 weeks. Can you say whoops?

The bottom line is that Dr Wrangham theorizes that the main cause of the modern epidemic of obesity is not overeating but the rise of processed foods -- which packs on more weight than raw food on a calorie-by-calorie basis. I would say that it's a combination of both. Studies have already shown that we're consuming some 523 calories more per day than we did just 30 years ago. Combine that with 30% more weight gain from the same calories because our diets have shifted overwhelmingly to cooked and processed foods, and you have the makings of an obesity epidemic.

The corollary, of course, is that eating a higher percentage of raw foods will help you lose weight on a calorie-by-calorie basis.
**Raw Food Is More Alive**

This is tough to prove. In fact, it's not even possible to reach agreement among raw foodists as to exactly what the "life force" in raw food actually is. Some people equate it to enzymes, others to non-denaturing, and others to the presence of the more mystical prana or qi. At that point, however, the discussion becomes metaphysical rather than pragmatic.

What people can agree on, though, is that raw food sits lighter in the digestive tract than cooked food. Think of the difference in the way you feel after a large salad or a smoothie versus after eating a Thanksgiving dinner or a couple of double cheeseburgers and an order of biggie fries, or an enchilada and bean special at a Mexican restaurant. As Forrest Gump might say, "Heavy is as heavy does."

**What Do I Recommend -- Raw or Cooked Food?**

My recommendation is a diet that is 70-75% raw -- with an emphasis on salads, vegetables, and fresh juices -- predominantly vegetable. If you want to follow to incorporate raw meats such as recommended in the Primal Diet, that's up to you -- but remember, the diet specifies high quality organic sources of raw meat and dairy. We're not talking about a pound of old hamburger picked up at your local supermarket that is artificially bathed in carbon monoxide to make it look pink and fresh. And if you follow the diet, please make sure to drink high pH water (either using alkalinizing drops or a water ionizer) to keep your body alkaline.
Sushi, or more technically sashimi, would also qualify as part of a raw food diet. My concerns here, though, are twofold:

• Elevated mercury levels -- even if you don't reach the "questionable" levels seen in Jeremy Piven.
• The fact that the sushi craze is depleting the world's oceans of many of its larger fish and is ultimately unsustainable.

I am not a huge fan of dairy in general. Incompletely digested large dairy proteins, such as casein, become antigens (substances that provoke immune reactions) once they enter the bloodstream in individuals who are sensitive to them. Plus, the milk you buy in the store is often loaded with antibiotics and growth hormones. If you must drink milk, be smart about your choices. Drink raw organic, if you can find it, as it avoids many of the problems associated with commercial dairy such as denatured proteins.

And Finally…

• Use digestive enzymes with all your meals -- or at least any containing cooked and/or processed foods. It's also worth noting that when first starting on a high raw food diet,
many people experience intestinal gas. Digestive enzymes can help ameliorate this problem.

• As discussed earlier, most beneficial probiotics have been heated out of the processed and cooked foods you eat, or been chlorinated off in commercial produce processing plants. You have no choice; unless you are growing your own food, you need to take supplemental probiotics to compensate. Keeping beneficial bacteria levels high in the intestinal tract is one of the best defenses you have against any pathogens that might be associated with eating raw food.

• If your immune system is healthy, bacteria such as E. coli and salmonella are not a problem. It is the very old, the very young, and those with compromised immune systems that you read about dying from contaminated food. Regular use of immune enhancers and as-required-use of pathogen destroyers will protect not only against food borne pathogens, but also against colds, flu, and a host of other illnesses -- including cancer.

• The recent economic downturn has brought back the Victory Garden. If managing a full-fledged garden is beyond your ken at the moment, you can always grow things such as fresh tomatoes or fresh herbs. In fact, they now even make self-contained countertop growing units that handle everything from regulating water and light.

• And don’t forget, sprouted grains, nuts, and seeds are some of the best raw foods you can eat. Even better, they are
inexpensive and easy to produce. And there are growing machines to automate this process too. (Sprouting may actually eliminate allergy problems that some people have with seeds and nuts.)

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