JACK SPRAT MUST EAT HIS FAT

LET'S LOOK AT SOME NUMBERS ...

Relax --- no need to rush for your calculator --- I'll do the arithmetic; you merely need to grasp the quantitative relationships. These numbers will be all about ...

FAT.

Dietary fat is our topic. Let us re-visit one the most fundamental NUTRI-SPEC themes --- that saturated fat is not only not bad, it is our most quantitatively important macro-nutrient. The companion theme is that cholesterol is not only not of the devil, it is a vital nutrient we use as a raw material to build brain tissue, nerve tissue, hormones, and selectively permeable cell membranes. Cholesterol is so critically needed that our livers produce 2000 milligrams of the stuff every day. If we are foolish enough to eat a low animal fat diet, our livers make more in a desperate attempt to meet our needs.

The dark side of dietary fat consists of the polyunsaturated vegetable oils. For the zillionth time, we must emphasize the catabolic oxidative damage done by omega 6 vegetable oils. These poisons are the ticket to ugly pathology and premature death --- despite 5 decades of public opinion-forming Agri-business propaganda to the contrary. The most seemingly radical theme of our Articles is that the omega 3 PUFAs from fish oil and flax oil are even more damaging than the omega 6 PUFAs.

Let us look at some numbers that put the intake of dietary fat into proper perspective.

The truth --- so completely opposite to the propaganda you have been fed --- is that ...

SATURATED FAT SHOULD MAKE UP
THE MAJORITY OF OUR FOOD INTAKE.

That statement repeatedly sends shock waves through the NUTRI-SPEC community. We make the point that the essentiality of dietary fat applies from cradle to grave --- that human milk is 54% high cholesterol saturated fat, and that our highest nutrient-density foods throughout childhood and adulthood are our meat, fish, poultry, eggs, and cheese. So, if our goal is to obtain the majority of our calories in the form of saturated fat, what does our personal food plan look like?

We need not snack on sticks of butter to raise our percent of calories derived from fat. Just to run a few numbers: 3 ounces of roast beef includes

390 calories, 324 of which come from fat (more than 310 of which is saturated and monounsaturated). This means that the roast beef is 83% fat, and 17% protein. Now add to our meal an entire cup of broccoli. The broccoli gives us 25 calories of carbohydrate, 15 of protein, and 5 of fat, in its total 45 calories. Next, add to our meal 2 medium baked potatoes. Here we are adding 200 total calories consisting of 175 from carbohydrate, 15 from protein, and 10 from fat.

Assume now that our meal is complete --- we have a total of 635 calories, 200 from carbohydrate, 95 from protein, and 340 from fat. The percentages of calories in our hypothetical meal are 31% from carbs, 15% from protein, and 54% from fat. Startling, isn't it? The percent of calories from fat in a meal of roast beef, baked potatoes, and broccoli is 54%, exactly the percentage of fat in human milk. The ratio of carbs to protein is about 2:1, which is significantly less than human infants need (--- the ratio of carbs to protein in human milk is 40:6, or nearly 7:1) --- for the simple reason that human infants need glucose (from lactose milk sugar) along with saturated fat for brain development.

Our roast beef, baked potatoes, and broccoli meal would be just fine for virtually anyone. Of course, some of us would love to put a little butter, or olive oil, or coconut oil on our potatoes. That doesn't seem too extreme, does it? So, if we add just 1 tablespoon of butter, we have increased the percent fat in our meal to exactly 60%. The percentages of carbohydrate and protein reduce to 27 and 13 respectively, but maintain the same 2:1 ratio with one another.

What we've just described is …

THE NUTRI-SPEC FUNDAMENTAL DIET …
EAT WELL – BE WELL.

Those of us who are lean can freely add the butter to our potatoes; those of us who are a bit overweight dare not. To fine-tune the diet for Glucogenic patients, we would recommend just one potato instead of two, and decide to add the butter or not depending upon whether the patient is lean or overweight. Ketogenic patients would add a third potato, and definitely think twice about adding the butter, unless extremely lean.

We could have constructed the above example with cuts of meat that are a little lower in fat and higher in protein than roast beef, but doing so doesn't change the numbers that dramatically. I trust this example helps to better quantify for you the proper role of saturated fat in the diet. And I think you can see that there is nothing "extreme" about the NUTRI-SPEC Fundamental Diet. Clearly, it is not the "high protein diet" many of you and your patients seem to believe it is. It emphasizes the <u>qualitative</u> importance of protein; it emphasizes the <u>frequency</u> of protein intake (--- <u>every</u> meal), but quantitatively speaking is actually only 10-20% protein.

Let's run a few more numbers. To establish a frame of reference, take a look at the fatty acid content of human body fat. Human fat consists of 40% saturated fat, 52% monounsaturated fat, and 8% polyunsaturated fat. [I suspect these percentages are distorted somewhat from what nature intended. Since the beginning of time, only in the last 50 years have human beings been enticed into eating ranch dressing and foods deep fried or grilled in PUFA oils. Human fat closer to 50% saturated, 45% monounsaturated, and 5% PUFA would likely represent something closer to natural/healthy.]

Now, look at our 324 calories of fat from our serving of roast beef. Roast beef is 46% saturated, 48% monounsaturated, and 6% polyunsaturated. As you can see, it very closely approximates the fatty acid make up of human fat. Regrettably, our beef steer suffered the same fate as we human beings --- being poisoned with PUFAs in the form of corn and soy feed. So, let's look at a more natural beef steer, one that is grass fed. Grass fed beef has a fat make up of 50% saturated, 40% monounsaturated, and 10% PUFA.

I am certain it would surprise those health nuts advocating grass fed beef to learn that it is actually a little higher in saturated fat than is grain fed beef (on a percentage basis, although it is lower in all fats on an absolute basis). Feeding grass increases the quantity of omega 3s a little --- an insignificant 7 calories (less than 1 gram) per serving. While those omega 3 numbers are statistically significant, they are clinically insignificant.

But look at the price paid for substituting grass fed beef for grain fed beef. (See the Table below.) Grass fed gives a much, much higher protein intake --- nearly double the protein in grain fed beef. There is nothing wrong with getting 127 calories of protein from a small serving of beef, but eating 3 meals that way could conceivably push the percentage of protein too high with respect to non-starchy vegetables. The big deal with switching from grain to grass fed beef is that you give up a substantial portion of the healthy monounsaturated fats --- more than 50 calories worth, and a decrease from 41% to 27% of the total calories. (Mono-unsaturated fats are responsible for the well-known health benefits of olive oil.)

Furthermore, while giving up healthy mono-unsaturates, a grass fed serving doubles the intake of potentially damaging PUFAs. Fortunately, the saturated and mono-unsaturated fat content is still high enough to give a healthy saturated fat to PUFA ratio. ----- Either way --- grain fed or grass fed beef makes a healthful contribution to Eat Well – Be Well (as does fish, poultry, eggs, and cheese --- particularly when combined with non-starchy vegetables).

	Grain Fed	Grass Fed
Total Calories - %	390 – 100%	390 – 100%
Protein Calories - %	66 – 17%	127 – 33%
Fat Calories - %	324 – 83%	263 – 67%
Saturated Fat Cal - %	152 – 39%	132 – 34%
Monounsaturated Cal - %	158 – 41%	105 – 27%
PUFA Calories - %	14 – 3.5%	26 – 7%
Omega 6 Calories - %	13 – 3.3%	18 – 4.5%
Omega 3 Calories - %	1 – 0.3%	8 – 2%

In summary, eating roast beef, whether grain fed or grass fed, gives us a high saturated fat to polyunsaturated fat ratio in our diet, which matches the high SFA: PUFA ratio of our own fat, and, matches the formula given to us by Hartroft and Porta back in 1968:

Health = (anti-oxidants/oxidants) X (Saturated Fatty Acids / Poly-Unsaturated Fatty Acids).