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Milk Matters

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Time for Tightening the Belt

With the holidays behind us your belt is probably feeling a little shorter and waistband a bit more snug than usual. Assuming you have upped your exercise routine, one of the first dietary plans that comes to mind is the low carbohydrate diet, also known as the high protein/high fat diet.

With calories coming from three basic sources (carbohydrates, fat and protein), there are ways to manipulate the ratio causing inefficiencies in our energy metabolism. The low carbohydrate approach has been around for decades but recently gained notoriety. Part of its new-found popularity is linked to a growing appreciation for the positive role fat can play in the diet.

After decades of nutritionists and the government preaching to avoid fat, new data shows that we do not live in a one-size-fits-all world. Some of us have healthier blood cholesterol and fat levels while eating a higher fat diet, while others have just the opposite response. Individualized diets are on the way.

Diet effects on the body

One of the first questions that comes up when considering the high protein/high fat diet is how does a diet of steak and eggs or lobster in butter help someone lose weight? It's all about efficiency and trade-offs.

The basic unit for carbohydrate is glucose. This is the blood sugar health professionals talk about. All other carbohydrates such as table sugar, starch, milk sugar, corn syrup, etc. are digested and converted to blood glucose and/or directly to fat if we eat too much. Certain tissues, notably brain and blood, require carbohydrates. If you don't eat it then you've got make it from something else. That something else is protein. The liver has the responsibility of converting protein to glucose.

Protein isn't stored like fat. You either rework the protein in the diet to make carbohydrate, or between meals you take it from body tissues.

In normal diets, blood glucose is maintained between meals by a modest storage system using glycogen. You have heard of "carbohydrate loading," a practice used by long distance runners to build up these reserves. With a low carbohydrate diet we are doing the opposite. At night we break down body protein to make glucose to feed the nervous system, red blood cells and other tissues that require glucose.

We also need to dump nitrogen from the protein as it is converted to glucose. Dairy producers know about ammonia and urea in the urine of their cows. Imagine if your cows were on a high protein diet! Dumping all that nitrogen takes energy, creating another inefficiency.

Using protein to replace glucose is expensive in terms of energy. What about the fat? Fat is easily stored as we know only too well. When we begin burning a lot of fat, a by-product called ketone bodies is produced. Ketone bodies serve a very useful purpose but as they build up in the blood they spill over into the urine. With it a lot of energy goes down the drain, literally.

Bottom line here is, with little carbohydrate in the diet your body becomes less efficient in energy utilization and you lose weight. Is there a downside? Some think so. What I do know is that nature abhors inefficiency. Survival depends on the ability to be efficient. Is there another way to lose the pounds but without straying from the balanced diet?

Dairy helps control weight

Dairy producers have supported research demonstrating that diets containing three servings per day of dairy products lead to weight control. This doesn't mean adding more cheese to your diet but rather adding cheese and cutting out the fried foods; drinking milk instead of bellywash; choosing yogurt over candy.

There is some component of milk that drives us toward a normal weight. Calcium plays a role but there is more to it than that. We are at the beginning of some of the most important nutrition research to come along in decades. Remember, milk is the only food designed to deliver nutrition and health. No other food can say that. Doesn't it make sense that nature would build into the system a mechanism to control weight? Over the next few years we will have definitive answers to this puzzle. In the meantime exercise and Three-A-Day makes more sense than ever.