

Wheying in on Whey and the 3 Energy Pathways

Anthony M Antonacci, NMD, CSCS, DC, FASBE

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I was sitting in the lobby of the gym the other day, watching all these folks walking out the door with hug canisters of Whey Protein powder supplementation, with the accompanying huge price tag. You could almost hide a small child in those “gi-normoous” canisters, with upwards of 60 grams per serving in 3 delicious flavors of sweetness, like “milli vanilli”, “count chocula” and “copa banana cream puff”.

So, what exactly is Whey?

If you take some whole milk, add extra enzymes and starter bacteria, and leave it at room temperature overnight the next day you would find that the milk has congealed. That is protein called curd and the watery part that had not thickened is called whey. If we squeezed it , the whey would run out and the curd would be left in a semi-soft block which would slowly ferment into cheese. This is a natural lactose (milk sugar) fermentation process, kind of like what occurs in our digestive tracts. However, in our digestive tracts the part that could not be fermented, the whey, would pass out our bowels and bladder as waste product.

Whey is the component of all milk that compromises the delivery system to the body. But is not part of the fermentable protein, even though it is a protein itself. It is a waste product of cheese making and also a waste product in our fermentation process called digestion. Cheese is only made from 8 to 10% of fermentable protein in the milk, so there are millions of gallons of whey the cheese plant has to dispose of. In “the day” farmers fed the whey to their hogs. However, the farmers soon realized that if the whey was fed to any animal, they got sickly and if you force-fed them too much whey, they died. We would attempt to feed the pale yellowish liquid at the bottom of the Ricotta cheese plastic tub, which was the whey, to our dog, he would sniff it and walk away. Just like a dog....if you can't eat it or play with it, piss on it and walk away.

Human Digestion Cannot Ferment Whey

Whey is a non-fermenting protein. If it cannot ferment in the cheese making process then it will never ferment in your stomach during the short time digestion takes place. Farm cats and dogs will not touch whey; however, they will devour whole raw milk and cream.

Some factories ran the whey into the nearest river after processing. That worked until the fish started to die. One of the first examples of destruction of aquatic life was reported in the [Milwaukee Journal in 2008](#), “An estimated 30,000 gallons of whey from a dairy processing plant was the source

of a fish kill on the Milwaukee River and one of its tributaries in Sheboygan County in the summer of 2007, officials reported this week.” “The whey killed forage fish such as white suckers and creek chubs and sport fish such as green sunfish, bluegill, pumpkinseed, yellow perch, smallmouth and largemouth bass and northern pike, according to DNR documents.



"It killed everything," Gottlieb said. "Crawfish were crawling out of the water. They are pretty tolerant (to pollution), but even they were having trouble."

Next, the factories piped the whey out to the farms and used it as irrigation and fertilizer. According to [Journal Dairy of Science](#), “Whey applications may not have an apparent detrimental effect on the pH of soils which are well limed and near neutral. However, whey added to soils with a pH of 5.0-5.5 may increase the soil acidity to a point which is injurious to plant growth.” Further, too much whey in the soil may overwhelm the soil bacteria causing them to die and the soil to sour or turn unhealthy. No studies were done concerning the detrimental impact of GMO whey.

As the cheese factories grew in size along with increased milk production, whey became a very expensive, hard to dispose of toxic waste product. Then the factories built a milk powder drying plant adjacent to the cheese plants. They pumped the whey from the cheese presses to the drying plant and evaporated out the water with very high temperature milk powder drying technology.

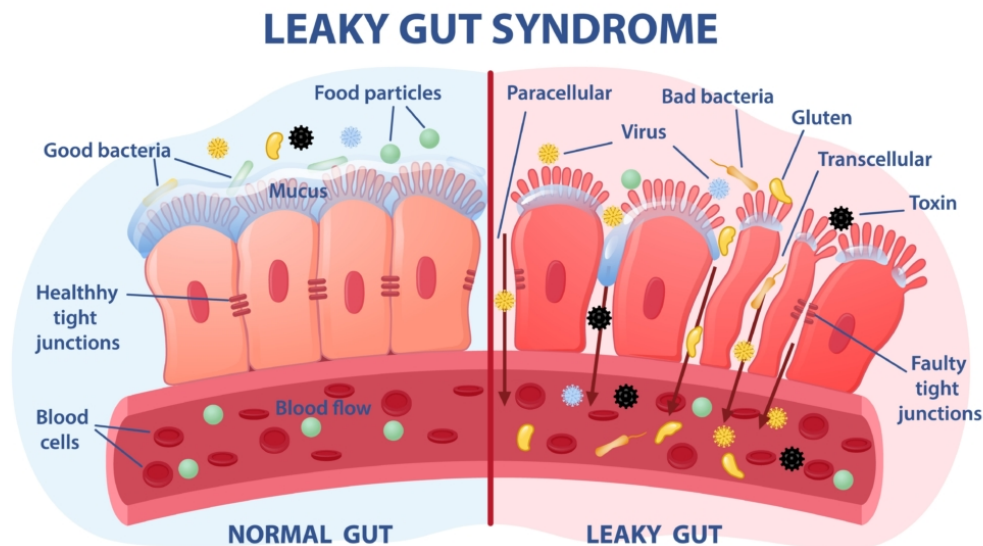
They then ran an ad campaign along the lines of the soy industry model and marketed whey to the health food industry. Because whey is a milk product they were covered under GRAS (generally regarded as safe) by the FDA. They were also able to price the whey powder way under high quality, healthier choice of Raw, Whole Fat Milk.

As a side note, according to [Livestrong](#), “Most Americans get more than the amount of protein they need even without using supplements, so regularly taking whey isolate could raise your risk of health problems associated with consuming too much protein, such as dehydration, kidney disease, kidney stones, osteoporosis and cancer.” Further, “Whey powder isn't able to act as a stand-in for whole, natural foods, as it can't match their nutritional quality, even if it's fortified with

vitamins and minerals.” These issues, are in addition to the fact that most whey is genetically modified and whey is not a complete protein, which is what the body needs.

And so here we are. The American cheese and yogurt companies built huge milk powder drying plants and pumped all their waste liquid, whey, through them and sold the whey powder waste very cheaply to the food manufacturing industry and to the health food industry at a very healthy profit.

And now it has found its way into your tummy creating leaky gut or dysbiosis.



According to a May 29, 2013 article in Headlines & Global News, "Whey is a thin, runny waste product that is illegal to dump. If the whey gets into the water system it will vastly deplete the oxygen, this could destroy aquatic life over large areas." Modern Farmer (May 22, 2013) reports, "Spills of cheese whey, a cousin of Greek yogurt whey, have killed tens of **thousands of fish** around the country in recent years.

Headlines and Global News further reported that for every three to four ounces of milk, companies like Chobani can only produce one ounce of the creamy strained yogurt, the rest of it becomes acid whey. Chobani is so desperate to get rid of the waste that **they pay farmers to take it off their hands**. The farmers then incorporate it into feed for the farm animals. Chobani has said that it sends more than 70 percent of its waste to farms for livestock feed. And they are just one of many companies. It has been demonstrated that whey can make animals sick and one of the reasons is **"the mineral imbalance that results from considerably long periods of whey feedings, especially in dairy cows"** (Pierre Thivend, Animal Production and Health Research Centre, Beaumont, France).

Intense Body Building Needs Protein

Unless you are stressing your body beyond the norm, as in certain athletics or intense body building, which most of you are not doing, you are unlikely to need more protein. You think you are

bodybuilding but most of you are not. If you want to see what real bodybuilding is, go to Gold's Gym in Venice Beach, California. Each set and each repetition is performed with intense focus. No texting, no phone calls, no reading the newspaper and no chatting about the bad "tat" you got at your spring break, drunk fest, your son's wedding or graduation and no chatting with your personal trainer, the one you are paying \$70-100 per hour and who incorrectly believes "whey is the next best thing".

The 3 Energy Pathways

The preceding and following have been overly simplified to protect the innocent. So, all you physiology majors can relax. This simply is suggesting that Whey protein powder supplementation remains questionable and to provide you with a history so you may make your own informed decision.

Taking a look at the 3 Energy Pathways of the body would be important for an understanding where the 3 Macronutrients come into to play, as well, to fuel them. The Macronutrients are Proteins, Carbohydrates and Fats.

Energy Pathway #1: ATP/CP

Which stands for Adenosine Triphosphate/ Creatine Phosphate. ATP is the Holy Grail that everyone is searching for....how to maximize ATP production and mitochondrial resuscitation, the power houses of the cell for increased performance, especially during short bursts of energy.

The ATP/CP energy pathway is used during the first 7 to 15 or 20 seconds of intense short bursts of energy. It is fueled predominately by Carbohydrates. One of the reasons you must rest between sets when you lift weights or sprint is because you are waiting for your body to resynthesize ATP/CP so you can do another set. If you keep doing reps without rest you will experience what is called "failure" and you will not be able to lift the weight any longer and it will burn.

Energy Pathway #2: ANEROBIC

The Anaerobic energy pathway is utilized up to 45 seconds or a little more during bursts of intense energy. It is also fueled predominately by Carbohydrates.

Energy Pathway #3: AEROBIC

The Aerobic pathway is utilized during long distance energy expenditure. It is fueled predominately by Fats. That is why everyone tells you to perform aerobic training to burn fat.

Now, here is the question for you. **Do you see Protein as a fuel for any of the 3 energy pathways?** Then why are you ingesting all this whey protein when it fuels nothing prior to or during training or during your activities of daily living? Is it because someone told you it would make you leaner and reduce your body fat percentage or BMI? **Protein is the macronutrient responsible for tissue repair, the building and rebuilding of tissue, if you will.**

Protein works while you sleep

And if no one told you, most tissue repair happens when you sleep, not when you train. When resting or sleeping, protein can do what it is meant to do, help your body build and rebuild tissue.

Contrary to what all the whey protein pushers tell you, to get you to reach into your back pocket, most of you get enough protein out of your diets, even some of the poor ones. In fact, most of you cannot even digest the protein you are taking in from your diet, let alone supplementation, and we see it objectively in the blood and digestive stool analysis every day.

Most Americans sit at a desk all day long and then go home and sit in front of their “tellie” until they go to sleep. How does that equate into a need for any type of protein supplementation?

That is the majority of what Americans do. That is why most Americans are sick, FAT and walking dead along with all the meds you take, because you want a “magic pill” versus getting off your “arse” and take responsibility for yourself. So, you hand yourself over to the allopaths and supplement pushers looking for the “Benjamins” in your back pocket. Un-friggin-believable! Mother Mary of Mercy and all that is Holy where’s that acid flashback when I need it?

Serious Training

When you train, and I mean train seriously, you may need a bit more protein. However, you are better off getting it from your nutrition first as in free range chicken, grass fed beef or lamb, organic beans and wild-caught fish and organic pasture fed eggs and organic sprouted grains and organic Raw dairy.

To be clear, if you decide to eat predominately protein and avoid carbohydrates and fats, you will most likely lose weight and get leaner. However, you are at risk of “Bonking”. Many of those that have trained intensely knows what that means, and know it is not healthy.

Whey Protein & Flatulence

Whey protein, hydrolyzed, concentrate or isolate is unstable and poorly absorbed. It is the reason many of you experience flatulence after ingesting whey proteins. You are also at risk of diarrhea and other gastro-intestinal issues. And at up to 56 grams a shot it is way, “whey” too much protein for the body to absorb and process.

Some studies have shown that **whey protein is only effective immediately after training, intense training**. Whey in the form you are ingesting it and as found in whey protein, supplement powders, is inexpensive to produce and must be heated at high temps. Further, it is grossly over processed and then the manufacturer adds indigestible fillers, “natural flavoring” and toxic, artificial sugars like sucralose (Splenda), aspartame (Equal), etc. to make the repulsive, bitter product taste “decent enough” so you will consume it. Most whey proteins come in at around 22 to upwards of 60 grams per servings, when you only need around 12 to 20 grams maximum, in supplementation. Even if the whey protein is processed at lower temperatures, it remains a poor supplementation product and is unstable. Try consuming it with no added sweetener and no flavoring. It is a good way to bring breakfast up as an offer to the Porcelain Goddess.

Whey is often genetically modified

Genetically modified organisms (GMOs) are when the gene of one species is combined with the gene of another species in ways not intended by nature, by god. And they are making us sick. Many of them also have the BT-toxin, used in pesticides, inserted into the DNA of the plant or organism. As reported by GMO Compass, Chymosin (also known as rennin) is the primary active ingredient in rennet (which is genetically modified). Yes, it is the same chymosin or rennet used in dairy and cheese making. In fact, the production of chymosin, with the aid of genetically modified

organisms, is widespread. As further reported by GMO Compass, "Between 80 or 90 percent of cheese in the USA and Great Britain is manufactured using chymosin produced using gene technology. The majority of the applied chymosin is retained in the whey (whey powder) and, at most, may be present in cheese in trace quantities." Did you catch that folks? The rennin (Chymosin) used to make whey protein is genetically modified. And the neurotoxic, artificial sweetener aspartame is genetically modified and often used to sweeten your whey protein too.

So, what to do if you really train hard and are in need of more protein for tissue repair and rebuilding, keeping in mind every time you train, you tear down muscle and create inflammation? Also keep in mind after you train, intensely, **you need a 4:1 Carbohydrate to Protein ratio** in your post recovery nutrition and should consume it within 30 to 40 minutes after intense training. That means 4 parts carbohydrate to 1 part whole protein, not the other way around. Going into a gym, sitting on a Lifecycle and texting for 30 minutes, 3 days a week, is not intense training and does not warrant a post recovery beverage, other than a Bud light. That is a warm up, nothing more.

Raw Milk versus Pasteurized Milk

And the best post recovery drink is Raw Whole Fat Milk. One 12 ounce glass of Raw Whole Fat Milk will be assimilated and is precisely what you need to replace the electrolytes (minerals) and sugars (carbohydrates) you need to include protein and fat to repair muscle tissue and feed your brain at the level that most of you are training at. The real big boys and girls will necessitate more, of course. I am not addressing their needs. I am addressing the needs of most of you that are simply attempting to attain some semblance of fitness and to be thoroughly redundant that rarely equates into training intensely, necessitating protein powder supplementation.

One of the last National Strength and Conditioning Association conferences I attended, for Nationally Certified Strength and Conditioning coaches, the PhD nutrition researchers from Ball State University gave a presentation that the best post recovery beverage was "low fat chocolate milk", pasteurized, of course. And many college health course texts books will reflect the same. Here is the good and bad and ugly of that research. They were on the good track about the milk. They were on bad track with the chocolate as the sugar replacement and they were on the ugly track with suggesting pasteurized, homogenized low fat milk, which is poorly assimilated, lacks and semblance of minerals or nutrient value and will lead to gastrointestinal distress, is beneficial at any time. You need raw, organic whole fat and the sugars in Raw Whole Fat Milk are adequate without adding Hershey's HFCS chocolate syrup. And even better is Raw, Whole Fat Goats Milk.

Rethink Whey - Think Egg White, Hemp or Goat

If you think you need protein powder supplementation, think egg white or hemp or goat, which are not heated at high temperatures or as highly processed, if at all, and are more effectively absorbed. Our fermented Protein Synergy or Meal Synergy (with fermented goat milk protein, carbohydrates (greens), healthy fat (goat milk cream and coconut) and antioxidants (wild blueberries) are excellent choices. And in the rational range you need of 13 to 20 grams or so. What you also, really need are Amino Acids. That is what your body is craving and whey from cow is not a great choice.

Rethink Whey - Think Chicken Breasts, Grass Fed Beef, Fish, Beans, Egg Whites

Watch any real body builder and athlete after they train. They are eating chicken breasts, egg whites, beans and good carbs, high quality fat and supplementing with Amino Acids. The pro-body

builders may promote all that whey protein powder for the sponsorship money, but they go to Food First, folks and so should you. Those large “freakazoid” muscles you see are from knowing how to mix and inject the proper chemicals that, in concert, will make you look -like that as you train intensely and eat real wholesome FOOD.

Reconsider Whey Protein Powder Supplements and look at Creatine Monohydrate instead to supplement your training or even Activities of Daily Living.

Current research is showing benefits to heart, brain and bone health as well as anti-aging benefits. Which is what I have been preaching for the last 25 years against all the naysayers that say CM only creates water gain and is harsh on the kidneys. If you review the Energy Pathways and look at ATP/CP, Creatine Monohydrate promotes the intramuscular formulation of creatine phosphate, CP, which produces more ATP which is the “holy grail” of energy and mitochondrial resuscitation. That is what you are searching for with energy production, not burdening your body with a waste product like whey. CM (in the right amounts) is safe and effective providing greater gains in muscle mass, isotonic lifting volume and sprint performance due to protein synthesis and yes fluid retention with electrolytes, which you need, not simply water weight gain.

Research out of the University of Maryland is showing CM supplementation helps lower Homocysteine, which along with CRP, is the bio-marker for arterial inflammation and risk for a cardiac event. Current research is also showing improvements in cognitive function and increased IQ scores in vegans and the elderly population because the brain uses creatine to produce ATP. New studies are showing improvement in bone mass, as well, along with resistance training.

Understand that creatine is naturally found in fish and meat. When they first were experimenting with creating a creatine supplement, they were attempting to replicate creatine phosphate. It was too unstable and so they settled on Creatine Monohydrate for supplementation and **we continue to see the benefits of CM well beyond what was initially thought including benefits to heart, brain, bone health, anti-aging and more.**

Via Con Dios

Anthony M. Antonacci NMD, DC, CSCS, FASBE