

Butyric Acid Delivers Powerful Bowel Benefits

"Butyrate is the primary energy source for colonic cells and has anti-inflammatory properties important for keeping colon cells healthy."

Take a minute with me and let the amazement of how your body works inspire you. You may have heard me quote the phrase "we are fearfully and wonderfully made." It's true, and the lowly colon is no exception.

A close friend and clinician shared a story that has changed the way I treat irritable bowel disease. My colleague's sister Jenny had severe bloody ulcerative colitis. An Osteopath recommended using Butyric Acid enemas in an effort to feed the colonic cells. By feeding the bowel with butyrate it would encourage healthy cellular function as well as reduce some of the inflammation which would slow down the transit time.

After ruling out food allergies and supplementing with probiotics and digestive aids, my colleague took the program a step further. She ordered a stool test to measure butyric acid and found out Jenny's levels were undetectable. Based on those findings she added Butyric-Cal-Mag from



Biotics Research orally: 2, three times a day. In 6 weeks when the test was repeated, her levels were in the high end of normal; but best of all, the entire diarrhea process stopped. Jenny has never had another bout of the bloody colitis.

Encouraged by this result, my colleague uses oral butyric acid with excellent results on many irritable bowel disease cases. Initially, she measured short chain fatty acids in the stool and found them low, particularly butyric acid. Now she evaluates by symptoms alone. Let's take a step back from one clini-

cian's experience and look closer at butyric acid and why it holds so much potential to optimize bowel health.

The history of butyrates goes back to the primary inventor of oral butyrate salts, Dr. Torben Neesby. He developed processes for producing both caprylic acid and butyric acid for oral use back in the early 80's. He reasoned that the salt of butyrate and caprylic acid are partially absorbed into the bloodstream; however more importantly, as they moved down the gut lining they

behaved almost like a soap compound.

Neesby observed a cause and effect use of butyrates on food allergies. Neesby would suggest 500 mg to 3 grams and observed reduced food sensitivities in individuals. Clinicians today generally use the 3 gram dose reducing the dose as symptoms subside.

We now know that butyric acid is a member of a class of short-chain fatty acids that are produced in the bowel by healthy anaerobic bacterial fermentation of non absorbed dietary fiber. Butyrate is the primary energy source for colonic cells. Butyrate also has anti-inflammatory properties that are important for keeping colon cells healthy and has some anti-carcinogenic properties. You can find the abstracts and some of the sources of dietary fibers below, but here's a quick summary.

Short-chain fatty acids, particularly butyric acid, have an anti-inflammatory effect on the bowel. One study showed it reduced tumor necrosis factor production and pro-inflammatory cytokine expression. Elevated levels of lipopolysaccharide have been shown to increase NF-kappa B. Butyrate also reduced the negative effects of lipopolysaccharide by inhibiting the proinflammatory cytokines that increase or induce NF-kappa B. NF-kappa B acts like an amplifier that ramps up inflammation and of particular interest is its ability to work through genetic expression.

This has some important ramifications for inflammatory bowel disease, particularly Crohn's disease. Also recent advances have identified mechanisms which display the anti-tumor properties of short-chain fatty acids. Short-chain fatty acids appear to induce apoptosis in colon cancer cells. The role of butyrate changes depending on its role in cancer or normal cells. Butyrate inhibits colonic tumor cells; however, it promotes healthy colonic epithelial cells.

Speaking of normalizing cells, ammonia is a by-product of gut dysfunction or dysbiosis. Ammonia, although necessary for various metabolic processes, can be a neurotoxin when in excess. It has been theorized that autistic children have compromised GI function and as a result have elevated ammonia levels.

Two medical doctors in the southwest have given autistic children butyrate as a clinical trial in an attempt to bring balance to the bowel flora and ultimately its ability to reduce ammonia levels. Both doctors have seen improvements in autistic children when given butyrate.

SCFAs may be tested via stool through various labs although a clinical trial for 30 days may be more cost effective. To increase butyric acid, consider Butyric-Cal-Mag, 500 mg of butyric acid, as well as a mixture of calcium, magnesium, vitamin A and pantothenic acid. Let's also feed the healthy bacteria, the dietary fibers and resistant starches they enjoy.

One of the long chain sugars that enhance short-chain fatty acid production is Larch arabinogalactans. So when you are using the product IAG from Biotics Research, you are inadvertently feeding the anaerobic fermentation process as well. With so many antibiotics being prescribed plus the typical American diet of refined foods and bad fats, it's no wonder that levels of butyric acid may be low.

I think you'll agree that SCFAs deliver powerful benefits. You'll find the information on the link below fascinating and it reinforces why Butyric-Cal-Mag can be so effective for your patients with compromised bowel function.

Thanks for reading this week's edition and I'll see you next Tuesday.