

## Best Cases In Biological Medicine Series #14

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N.C. was a 5 pound 4 ounce male born at 34 weeks gestation by caesarian section to a G3P2, 23 year old mother. At 16 weeks gestation an ultrasound showed gastroschisis. The membranes ruptured prematurely and after 24 hours fever developed in the mother. Emergency C section was done. At birth gastroschisis was noted, but there were pussy exudates covering the open peritoneal cavity with gangrenous bowel. Surgery was done and 6 cm of large intestine was removed along with 12 cm of small intestine. An ileostomy was placed. TPN was started. He had difficulty with oral feeding and the TPN was continued. At 15 months he developed hepatitis secondary to the TPN solution and it had to be discontinued.

A jejunal feeding tube was placed but was not tolerated well. He remained in the hospital most of his 17 months of life due to recurrent line infections and need for parenteral feedings. Between 8 and 16 months of age he gained only 2 pounds.

He was seen for evaluation at Lifeworks Wellness Center at age 16 months on a day pass from the hospital. He was 17 pounds at that time. He was frail, lethargic, flaccid, with very green skin. Bilirubin was 24.2. Pre albumin was 6.2 (17-38), ammonia 40 (11-35). He had an NG tube and intermittent TPN was being given. Liver transplant was offered to the parents but refused.

Because of his severe liver disease he was unable to take parenteral amino acids and was restricted on dietary protein. After Biological Medicine evaluation he was recommended BioBulde as a protein source at a dose of 0.4 grams per kilogram per day in divided doses. The tablets were crushed and given in a small amount of honey and water.

In one week he gained a pound and tolerated the oral amino acids well. Over several months his liver function tests reduced to normal and Bilirubin went down to 0.2. He continued to grow and chemistries normalized. At age 36 months he weighed 23 pounds and had normal development for age. He has oral feedings of pureed foods, BioBulde, and normal dietary proteins.

BioBulde is a patented mixture of 8 essential amino acids. It was originally formulated after 23 years of research for use in protein malnourished infants. This product is has the highest nitrogen retention rate of any known food or supplement.

In the normal metabolism of oral protein two pathways exist. An anabolic pathway wherein the amino acids are incorporated into body proteins, and a catabolic pathway where the nitrogen is removed and the leftover carbon chain is used as calories or energy storage in the form of glycogen or fat.

The published research has proven that the relative amounts of the amino acids in the protein determine the percentage of which pathway is utilized. The ratio of how much is anabolized vs catabolized determines the net nitrogen utilization (NNU).

In a double blind triple crossover study comparing the Net Nitrogen Usage (NNU) of BioBulde to egg protein and hydrolyzed egg protein, the egg products showed an anabolic retention rate of 48%. The BioBulde had a nitrogen retention rate of 99%. This means that almost no nitrogen is given off as a waste product in the utilization of BioBulde and therefore less than 1% goes to nitrogen waste. This relieves the liver and kidney of a nitrogen burden. In the patient with liver and kidney disease this means that the full amount of dietary protein can be given as BioBulde without risk of nitrogen overload.

When comparing these NNU rates to other known protein foods like whey (17%) and soy (17%), egg whites (17%), beef, chicken and fish (30% average) one can conclude that whole egg protein is the best food source of usable protein, while BioBulde is 2x more effective.

For this infant, BioBulde as his protein source allowed him to be in an anabolic protein condition and gain weight in spite of his poor liver condition.

Since the product is already predigested, no gastric acid or pancreatic enzyme function is needed for digestion or absorption. Blood levels of the 8 amino acids can be measured in 22 minutes after oral ingestion.

While some have argued that histidine is an essential amino acid, within several hours after BioBulde feeding, serum histidine levels rise proving that it is synthesized from the 8 essential amino acids present in BioBulde.

The 99% NNU is achieved because of the unique patented ratio of the amino acids that allows maximum utilization and protein synthesis. No other oral or IV amino acid product on the market has an NNU of greater than 20%. This low level of nitrogen utilization results in an 80% nitrogen waste load.

Because of this high ratio of nitrogen retention the product has proven extremely beneficial in several different clinical arenas. Here are some examples:

1. Athletes: Several studies have shown that because of the rapid and high NNU, the development of muscle mass, recovery, strength, and lactic acid clearance are vastly improved when BioBulde is a part of the athlete's dietary intake.
2. Menopausal women: Clinical experience has shown that the mood changes and sleep problems seen can be greatly improved by taking BioBulde as a dietary supplement. Inadequate protein intake in these women may be a major factor in this condition.
3. Renal and liver patients: These patients by necessity are on low protein diets since their bodies cannot handle the nitrogen load of normal protein diets. These low protein intakes lead to immune deficiency, skin breakdown, anemia, poor wound healing and other problems. By using BioBulde as the protein source normal protein levels can be maintained and health improved.
4. Anyone with pancreatic enzyme deficiency or HCL deficiency: These conditions can be caused by inadequate protein in the diet, or they can be caused by pharmaceutical intervention. Acid blocker drugs and anti-acids are in common use in this country. In fact over \$24 billion are spent on them. These drugs induce an achlorhydric state in the person taking them. Without stomach HCL, pepsin is inactive and protein digestion fails. These people will become protein deficient. BioBulde does not require stomach acid to be effective and so can supplement protein intake in people on these medications.
5. Osteoporosis: By weight, bone is 50% collagen matrix, on which the mineral apatite is deposited. While much of the attention of the medical community has been on mineral supplementation, Vitamin D and hormone status, inadequate protein intake may also be at the root of osteoporosis. Our clinical experience has shown that bone recovery often occurs when BioBulde is added to the nutritional program.
6. Obesity: Giving 10 tablets of BioBulde in place of protein at mealtimes along with a fruit and vegetable diet resulted in weight loss of an average of 3 pounds per week without yo-yo effect or catabolic state.
7. Elderly: Either because of poor dentition, lack of money to purchase quality dietary protein, digestion problems (achlorhydria or pancreatic enzyme deficiency) with proteins leading to avoidance of protein is common in the elderly. This may explain why many elderly are protein malnourished. This catabolic state leads to muscle wasting, weakness, falls, fractures, slow recovery, immune deficiency, and degenerative conditions. Supplementing with BioBulde can lead to a turnaround in all of these conditions.
8. Cancer nutrition: Many cancer patients have problems with protein intake and become malnourished. This adds to immune deficiency, lack of energy and fuels depression. Many cancer patients will show rapid lean weight gain and improvement in detox and immune function when supplemented with BioBulde.
9. Post op: The importance of high protein intake post trauma or post op cannot be emphasized too much. The vast majority of post op patients do not pay enough attention to this. In many studies the catabolic states remain for weeks after such episodes. This need not be the case and isn't if the patient is supplemented.
10. Anti-aging: One of the most prominent features of aging is protein loss in the form of connective tissue, muscle and bone. In fact it is our experience that external hormone supplementation is usually not necessary if protein supplementation is given in the form of BioBulde.
11. Nursing mothers: Nursing mothers have high protein requirements, and the quality of breast milk is dependent on the quality of their diet. Protein supplementation using BioBulde results in our experience in faster maternal recovery and infants who sleep longer between feedings.

Whether it be the infant with gastroschisis and short gut or any other patients seeking improved health, high quality protein nutrition is essential and can create rapid recoveries and improved outcomes.

Biological Medicine is the science of working with the laws of nature and life to heal the body. When these principles are followed, and the patient is compliant, and providing we are not too late, we can be successful.

Dr. Minkoff is Medical Director of BodyHealth Inc that distributes BioBulde. Published references are available upon request. 🌸

*Biological medicine works. The purpose of this series is to present illustrative cases from different practitioners in order to demonstrate the highly effective principles and practice of Biologic Medicine. If you have cases that have educational value for others using Biological Medicine in practice, please email them in Word format to Dr. David I. Minkoff M.D. at drminkoff@bodyhealt h.com. They will be presented each month as part of the Best Cases in Biological Medicine series.*