

Colostrum - The Perfect Prescription

And it's three times more effective than vaccines for preventing influenza!

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A perfect natural supplement (or even a perfect chemical medicine) is one that would not only provide *broad spectrum* immunity from disease, but would also come to the rescue in the event we did succumb to one of Pasteur's nasty bugs. While I seriously doubt that science will ever be able to create the perfect medicine, a significant amount of research indicates that Mother Nature has had the answer all along.

I have attempted to write the following information to be easily understood by the layperson as well as the doctor, however, it is necessary to add extensive references for the scientific minded reader, and I apologize in advance if such "referencing" proves a little "tiring" to the lay-reader. I urge you to *stay the course* and learn about nature's perfect answer to many health problems.

While the knowledge that colostrum is essential for newborns is *old news*, **clinical trials and research over the past few decades show that colostrum truly is unquestionably one of nature's most powerful contributions to health, and not just for the newborn.** While this article is certainly not an all-inclusive list of the vast amount of research available on colostrum, I hope to educate parents and the victims of chronic poor health, and to stimulate health care professionals to go forth and satisfy themselves that **colostrum may just be a perfect, safe and effective adjunct in the treatment of many chronic health problems.**

Colostrum (*also called foremilk*) is a thin yellowish fluid secreted by the mammary glands at the time of parturition that is rich in antibodies and minerals, and precedes the production of true milk. **Colostrum contains many substances that are important to immunity and health including: Immunoglobulin's (IgG, IgA, IgD, IgE, and IgM); which are natural antibiotic factors, or substances that neutralize toxins, viruses, and bacteria, particularly in the digestive and respiratory systems.** These antibodies specifically recognize any foreign compound that enters the body, then direct themselves to the invader and attack it; Cytokines; which are small proteins that affect the behavior of other cells; Lactoferrin; which is a substance that neutralizes bacteria and helps release cytokines; and Growth factors (IGF-I, IGF-II, EGF, TGF α & β) which are substances that aid in cellular, muscular and skeletal growth.

Research shows colostrum to be one of nature's most potent, broad-spectrum substances;
Chiropractic Journal. Joseph M, Flesch A. (1998)¹⁴

The importance of colostrum factors: A study in 1997¹² shows the importance of colostrum for the newborn calf. This review indicated that delaying colostrum intake by one day impairs plasma lipid, essential fatty acid, carotene, retinol and a-tocopherol status in neonatal calves¹². We can likely deduce that the same holds true for humans. Kelly GS (2003)¹⁵ reviewed the clinical uses of colostrum and reported that Bovine colostrum has higher amounts of immunoglobulins, growth factors, cytokines and nucleosides than mature milk, and is also rich in oligosaccharides, antimicrobials, and immune-regulating factors. **Multiple research studies indicate that colostrum can have a beneficial effect on improving body composition, athletic performance, diarrhea (particularly in people with immune deficiency), gastrointestinal disturbances, and infectious diseases.**

Safety: While multiple studies are available attesting to the safety of colostrum, common sense dictates that virtually every living mammal has consumed it without ill effects. In one particular study, Davis, PF, Greenhill, NS, Rowan, AM, Schollum, LM. (2007)⁴ tested New Zealand *bovine* colostrum in rat chow and discovered no observable toxicological or histopathological abnormalities.

Oral absorption: A study conducted on newborn rats by Jochims K, Kaup FJ, Drommer W. (1994)¹ demonstrated that IgG molecules were absorbed primarily in the first portion, as well as further along in the small intestine, as opposed to the stomach. Another study by Petschow B, Talbott R. (1994)² shows that gastric acid and pancreatic trypsin (a digestive enzyme) reduce the biological activity of bovine milk antibodies as they pass through the digestive tract. At the same time Mother Nature has addressed this issue as was shown by Sandholm M, Honkanen-Buzalski T. (1979)³, who found that *colostrum contains a trypsin inhibitor that helps protect IgG and other components of colostrum from digestion in the gastrointestinal tract.*

Below is a partial list of conditions colostrum shows success in treating:

Influenza: In a 2007 epidemiologic study in San Valentino⁵, colostrum was compared to anti-influenza vaccination for effectiveness in preventing the flu in healthy as well as high risk cardiovascular patients. The study found that 2 months supplementation with colostrum is at least 3 times more effective than vaccination in preventing flu. This study follows and supports a 1990 study²⁶.

Cancer: A study in 1997²⁵ may give hope for cancer patients. The study shows that conjugated linoleic acid, a component of cow's milk and colostrum, inhibits proliferation of human malignant melanoma, colorectal, breast and lung cancer cell lines. It also has been shown to reduce the incidence of chemically induced mouse epidermal tumors, mouse forestomach neoplasia, and aberrant crypt foci in rats. It also inhibits mammary tumorigenesis. ***This study makes a good case for Colostrum as an adjunct in cancer therapies.***

Body Composition: **A 2004 study⁶ of healthy young men in resistance training who were taking colostrum at the rate of 60 g/day for 8 weeks, showed a significantly greater increase in body comp/limb circumference than those taking whey protein⁶. Doctors that use body comp analysis in practice to provide a marker for health take note – colostrum may be a tremendous boost to cell health (which can be monitored by evaluating Phase Angle) in addition to its immune boosting qualities!**

Upper Respiratory Tract Infection – Bronchitis – Viral Infections: Brink worth GD, Buckley JD. (2004)⁷ conducted a study that shows evidence that concentrated bovine colostrum protein **may enhance resistance to the development of symptoms of upper respiratory tract infections (URI)**. A study by Tyrell D. (1981)⁸ shows that breast fed babies are much less likely to experience bronchitis due to RSV (respiratory syncytial virus) than bottle fed babies. The antiviral activity of breast milk and colostrum is partially due to antibodies (immunoglobulins) and partially due to other causes, possibly polysaccharides found on a number of the constituents of colostrum. The main effect of these components of colostrum and milk take place in the gut.

Rheumatoid and other forms of Arthritis: Several studies indicate that bovine colostrum may be a very **successful treatment for rheumatoid and other forms of arthritis**. In one 2004⁹ study, it was found that Oral administration of bovine lactoferrin, a component of colostrum, inhibited the development of arthritis in a rat experimental system by suppressing TNF-alpha (pro-inflammatory cytokine) and increasing IL-10 (anti-inflammatory cytokine) production. **Two other studies in 1996²¹ and 1999²² indicate that substances in colostrum may have a major impact on the inflammation seen in arthritis.**

Physical Performance: Research in 2000¹⁰ studied the effect of colostrum supplementation on maximal oxygen uptake and flight times in jump tests in 10 young athletes in a double-blind placebo study. **After 12 days, oxygen uptake in the placebo group declined 7% while remaining steady in the colostrum group.** Flight times declined for the placebo group in the counter movement and squat jumps while remaining the same or only slightly less for the colostrum group. **The results indicate that colostrum supplementation improves running and jumping performance in young athletes.**

Anti-Inflammatory: Colostrum could possibly provide pain relief for injury and reduced healing time. In an experimental study in 1993¹¹ colostrum showed an anti-inflammatory effect on wounds by decreasing the number of white blood cells in the wound area.

Blood Pressure: **A study in 2004¹³ shows that factors from milk and colostrum are potent ACE inhibitors. Several human studies associate these factors with lower systolic and diastolic blood pressures.**

Diarrhea/Intestinal Infection: Clostridium Difficile Bacterium (C Diff) is a toxin that causes diarrhea and intestinal infection. Research indicates that C Diff is primarily acquired during hospital visits, and largely due to over-use of antibiotics. In recent reports, C Diff is blamed for 7000 new infections daily, resulting in 300 daily deaths. A study in 1998¹⁶ indicates that the C Diff neutralizing factor in colostrum (IgG) survives the digestive tract, indicating that oral colostrum shows great promise as an effective treatment for this deadly toxin. Another study in 1992²⁷ shows that IgG from colostrum can help prevent nosocomial infections, i.e. infections which are a result of treatment in a hospital.

Rotavirus: One of the main reasons for hospital admission of infants and young children is infectious diarrhea usually caused by a rotavirus infection. Infants can also acquire rotavirus in hospital neonatal and pediatric wards; the infection can also be transmitted to adult members of the family. In a 1989 study²⁰, the efficacy of a

10-day course of bovine colostrum with high antibody titre against the four known human rotavirus serotypes in protecting children against rotavirus infection was examined in patients admitted to hospital. Of the total group of children in the study, none of the 55 receiving colostrum acquired Rotavirus infection, while 9 in the control that did not receive colostrum did.

Inflammatory Bowel Disease/Crohn's Disease: A study in 2004¹⁷ showed that Mice with experimentally-induced inflammatory bowel disease, fed a diet rich in colostrum transforming growth factor beta-2 (TGF-β2) gained more weight, did not develop diarrhea or prolapse, had lower pathological scores and lower serum amyloid (SAA). This study supports the use of TGF-β2 diets in the treatment of Crohn's disease. This study follows a study in 1990³¹ that shows that there is a direct correlation between increased intestinal permeability and Crohn's disease.

Helicobacter Pylori: H. pylori causes gastric and duodenal ulcers in humans. It was shown in a 1998 study¹⁹ that bovine colostrum blocks attachment of the pathogens to PE. Colostral PE or PE derivatives also bind to the pathogens, inhibiting their ability to bind to target cells. Another study in 1995²³ shows that both serum and colostrum but not milk from cows was found to be highly bactericidal against H. pylori.

Leaky Gut: Multiple studies show that colostrum "heals" leaky gut. A 2004 study³³ is but one example. Since the "gut" is the beginning of health, and since leaky gut is epidemic, it makes a great deal of sense to start your journey to better health with colostrum.

Allergy: Allergy is characterized by elevated levels of specific IgE in the blood, called "atopy". According to research in 2002²⁴ Therapy with anti-IgE has shown promise in inhibiting early and late-phase allergic reactions and asthma. Colostrum contains both IgE and IgE-blockers. An additional study in 2005²⁸ suggests that colostrum may protect from both infectious disease and allergies mediated by Th2 type responses.

Antibacterial-Antifungal-Antiviral-Antitumor-Antialzheimers - Plus More: Colostrum and milk are rich in proteins and peptides which play a crucial role in innate immunity when transferred to the offspring, and may accelerate maturation of the immune system in neonates. The immunotropic properties of these proteins prompted investigators in 2005¹⁸ to research their potential application in prevention and therapy. **Lactoferrin (LF)** exhibits antibacterial, antifungal, antiviral, antiparasitic, and antitumoral activities. It is protective with regard to intestinal epithelium, promotes bone growth, and accelerates the recovery of immune system function in immunocompromised animals. LF was tried in the treatment of hepatitis C infection and the intestinal form of graft-versus-host disease (GvHD). A proline-rich polypeptide (PRP) demonstrated a variety of immunotropic functions, including the promotion of T-cell maturation and inhibition of autoimmune disorders. PRP, in the form of chewable tablets (Colostrinin) was recently found to improve or stabilize the health status of Alzheimer's disease patients. Casein and casein-derived peptides showed protective activities in enamel demineralization and as caries-preventing agents. The protein hydrolyzates were also protective in diabetic animals, reduced tumor growth, had antihypertensive activity and diminished colicky symptoms in infants. Glycomacropeptide (GMP), a peptide derived from kappa-casein, exhibited various antibacterial and antithrombotic activities. Alpha-lactalbumin (LA) demonstrated antiviral, antitumoral and anti-stress properties. LA-enriched diets were anxiolytic lowered blood pressure in rats, prevented diarrhea, and led to a better weight gain in malnourished children. HAMLET, a complex of LA and oleic acid, was effective in patients with cutaneous papillomas. Lysozyme found application in infant formulas, the treatment of periodontitis, and the prevention of tooth decay. Milk enriched in lysozyme was used in feeding premature infants suffering from concomitant diseases. Interesting, antibacterial properties were exhibited by lactoperoxidase. Both lysozyme and lactoperoxidase required cooperative action with LF in combating bacteria. In conclusion, preparations derived from milk and colostrum are effective, easily bioaccessible, and safe, finding wide application in prevention and therapy for newborns and adults.

Prevention of intestinal damage from NSAIDs/Chemotherapy: NSAIDs given to animals have much the same effect as they do in humans, namely, increased intestinal permeability, increased enteric bacteria levels, villous loss, and loss of enteric protein and albumin. A study in 2005²⁹ indicates that supplementation with bovine colostrum reduced the increase in intestinal permeability, the enteric bacteria overgrowth, the loss of proteins, and villous damage. This study follows finding in 1999³² that taking colostrum prior to NSAIDs reduced gastric injury by up to 60%. Additional studies indicate that colostrum is protective against chemotherapy-induced mucositis.

Psychiatric Disorders: Certain chronic psychiatric disorders are characterized by a change in intestinal permeability³⁰. This is another reminder that “health begins in the gut” despite what your doctor tells you!

The research on colostrum included in this writing is just a small number of the many studies conducted on this *super fuel* that kick starts life. I have concluded this article with a true life experience for those that would like additional testimony. **The contribution of colostrum to health improvement and recovery in the young and old alike is clear, but like all other supplements however, it is important to spend a little time choosing a quality product.** Keep in mind, you generally get what you pay for and cheap means exactly that. Spend a little extra on quality prevention and you likely won't be spending that at the doctor's office!

It was about 4am on that snowy January morning when I found little Maverick covered in snow, alone and not moving. He had not been “cleaned” after birth and mom was nowhere to be seen. I had forced myself from the comfort of my warm bed and into the icy morning because I had several *soon-to-be* mothers ready to calve. Bovine expectant mothers often select the worst winter night of the year to deposit their newborns into the world. It seems to me that the cows plan this just to “stick it to the man”!

I do not know to this day who mothered the little Brangus bull that my son named Maverick. I never figured out whether Maverick was dropped by a stork, was the Christ calf or whether mom selected the middle of a pasture because she couldn't make it to the local fire department. I do know that she forgot the warm blanket. Maverick could not have been over a few hours old and was barely clinging to life. I wrapped him in my coat, placed him in the seat of my truck and departed for a warmer climate. He would not/could not take a bottle and frankly, his future was not promising. It did not seem likely that he had received that first colostrum from mom, and calves born into such conditions generally do not survive more than a day or two. Since this is not a novel on the life and times of a little bull named Maverick; I will “cut to the chase”...

Maverick had to be fed via a feeding tube into which I poured milk infused with colostrum and another miracle substance known as Z Factor. By that afternoon little Maverick was a miracle calf. He was winking at me and smiling; by the end of the week he was chasing the cat and coming to find my son at feeding time, and about a year later he was the king of the pasture at over 1000 pounds. I will also add that little Mav' never had an antibiotic, nor a vaccine!

Looking back to that wintry night whereby that little spark of life almost wasn't, you may be thinking that; 1) it could have just been the warmth and milk that saved Maverick; or 2) that he was a miracle calf to begin with therefore pulling him from the brink of death was no challenge; or 3) any experienced vet could have saved him with their powerful knowledge and medicines?

You may be right on #2 but I can assure you that application of #1 or #3 would have been a death sentence. Any experienced rancher will tell you that under the conditions Maverick found himself in he was surely doomed. Generally speaking; mother's first milk decides life or death in newborn calves, particularly in the conditions in which Maverick was and no other substance that I have ever found, including antibiotics will save them from the imminent pneumonia. I could tell you stories of how I have used colostrum in place of antibiotics successfully on many more than one occasion with animals and humans of all ages, but hopefully by now you get the point; you realize the power of colostrum. Add Z Factor and take small doses daily, and you have a recipe for prevention and recovery - for life!

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Dr. Eric Carter is a long time cattle rancher and researcher, and is also the president of the Pastoral Medical Association (www.pmai.us); a global organization working to promote the knowledge of safe, natural health.

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