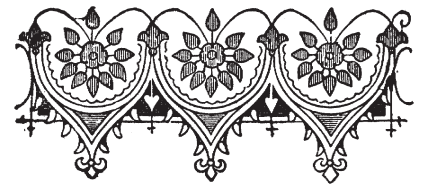


Health & Wellness



Colostrum: Good for Babies, Cows and You!



Dr. Kate Thomsen and Silky

Since the 1950s, there has been a movement to educate the American public about the benefits of breastfeeding infants. Breast feeding can strengthen an infant's resistance to infection and disease and there are research papers claiming many other benefits, including higher IQ scores. Some of the benefits of human breast milk are in the colostrum, "mother's first milk" secreted in the first 2 – 3 days after delivery. This rich mixture of primarily proteins and antibodies is a "liquid gold" gift to a newborn. In the womb, assimilated "food" was delivered from mother's blood to baby's blood – bypassing the usual food delivery via the intestines. After birth, the first food that enters the newborn's intestine will challenge that intestinal wall's integrity and it will leak sugars and proteins into the blood. The colostrum will provide these proteins and sugars which leak into the blood for a few days until the "leaky gut" is healed. This leakage provides temporary immune support and information signaling into the circulation while the infant transitions to it's out of the womb experience. Since the newborn's immune system is also not fully developed, other components of the colostrum prevent infections through a process known as passive immunity. Colostrum also acts as a natural laxative, encouraging passage of the newborn's first stool. This stool called meconium, is full of bilirubin

- produced from recycled red blood cells. If not excreted, it can cause newborn jaundice. The many components of colostrum pack a powerhouse of benefits in a small quantity of fluid. Every mammal makes colostrum for their young and, though it may differ slightly in composition, colostrum in the first hours of life is thought to be critical for survival for most species.

Adult humans have been using bovine colostrum for thousands of years – both to treat health conditions and for maintenance of well-being. Colostrum was used as an antibiotic before the pharmaceutical era. Albert Sabin, who developed the first polio vaccine, isolated these first anti-polio antibodies from bovine (cow) colostrum. Colostrum is crucial for the health of newborn farm animals. To get sufficient amounts of colostrum into young calves within 30 minutes of birth, livestock breeders have learned to produce excess and bank the extra colostrum. Bovine colostrum is bio-identical to human colostrum. Is there data showing that adult humans might benefit from taking bovine (cow) colostrum as a health supplement?

Supporting the Immune System: Colostrum contains Immunoglobulins IgG, IgM, IgA and secretory IgA. These are often called antibodies and they are typically made by the body when one is exposed to an invader like unwanted bacteria or viruses. Not being made specifically to a present threat, colostrum's antibodies perform "passive immunity". These cow antibodies attach to microbes on the inner surfaces of the intestinal tract and respiratory tract preventing them from crossing into the blood and causing infection. The antibodies in colostrum have been shown to bind to H pylori, Giardia, the food poisoning E Coli, C diff, rotavirus, Shigella, Strep, cryptosporidium and others. Colostrum also stimulates

the body's own immune system by enhancing the growth of white blood cells.

Lactoferrin: Colostrum contains lactoferrin, an iron chelator that grabs up iron from the blood stream and delivers it to cells that need it. In this way, it deprives harmful bacteria of the iron they thrive on. Lactoferrin is also an anti-viral substance with activity against HIV, CMV, Hepatitis C and other viruses. Lactoferrin also exhibits anti-fungal properties and is used to treat several strains of Candida. Lactoferrin promotes the growth of a beneficial bacteria called bifidobacter.

Lactoperoxidase: Like lactoferrin, lactoperoxidase is an anti-microbial protein. Killing with peroxides is effective against viral, fungal, and bacterial pathogens.

Cytokines: These chemical messengers are designed to stimulate the immune system when needed. Colostrum contains the cytokines Interleukin 1, Interleukin 6, tumor necrosis factor, and interferon gamma. Stimulation of the immune system may be beneficial for an aging immune system or immunodeficient people.

PRPs (Proline Rich Polypeptides): This diverse group of small proteins found in colostrum are also referred to as Colostrinin. They help to regulate the immune system at the level of the thymus. They balance an overactive immune system and have been used to treat autoimmune conditions like rheumatoid arthritis. PRPs also stimulate an underactive immune system. They also have beneficial effects on cognitive functioning and are being studied as agents to reduce progression in Alzheimer's Disease.

Oligosaccharides: These sugar molecules bind up many types of bacteria in the intestines preventing them from getting into the blood.

Vitamins: Vitamins A, C and E are found in colostrum. These are anti-oxidants

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INTEGRATIVE AND HOLISTIC HEALTH AND WELLNESS

What to Look for in a Colostrum Supplement

- What is the source of the Colostrum? Most comes from dairy cows
 - o Are the cows pasture fed?
 - o Are they antibiotic and hormone free?
 - o Are they fed GMO crops?
- Where is the Colostrum made?
 - o Is it made in a current Good Manufacturing Practice (cGMP) facility?
 - o Is it overheated in processing? This can destroy many of the bioactives
 - o Is it batch tested by an independent lab for impurities as well as bioactive ingredients? Can you get a copy of that analysis by writing to the company?
- How will the colostrum survive the stomach acid environment?
 - o What is the delivery process that ensures the product gets to the intestines?



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Additional articles on holistic health topics can be found on the website

that can reduce free radical damage. Vitamin B12, an important player in immune function, is also found in colostrum.

Growth Factors: Colostrum contains several growth factors important for supporting cell growth, differentiation and renewal. These include Vascular Endothelial Growth Factor (VEGF) which promotes the growth of new blood vessels, Epidermal Growth Factor (EGF) and Fibroblast Growth Factor (FGF) for the skin and the intestines, and Transforming Growth Factor alpha (TGF alpha) which stimulates the growth of normal cells.

Hormones: Insulin Like Growth Factor-1 is plentiful in colostrum. This hormone is anabolic in nature, helping to build strength and endurance.

This highly concentrated, dizzying array of natural health promoting factors is an ideal food for newborn mammals. We can also put it's immune and anabolic properties to good use supporting growing humans. Healing

leaky gut, eliminating pathogenic microbes, stimulating and regulating the immune responses can be considered preventive medicine. It would be especially useful for people with autoimmune conditions, allergies, and chronic infections. The growth and repair properties of colostrum have been shown to benefit athletes, the injured and the aging. I take my colostrum every day – twice per day. I consider it fundamental!!!

Dr. Kate Thomsen's office for holistic health care is located in Pennington, NJ. She is trained in Family Medicine, and Board Certified in Integrative Medicine, and is an Institute for Functional Medicine Certified Practitioner. She has been practicing Functional Medicine for 20 years. For more information see www.drkatethomsen.com or call the office at 609-818-9700