



# BOOSTRUM

Colostrum 500mg Tablets

# BOOSTRUM

## Human Colostrum

- **Colostrum** is the first mammal secretion that a mammal provides for its new born.
- **Colostrum** – Mother Milk – yellow fluid – mammary glands.
- Colostrum is valuable in shaping the knowledge of the newborn's defense system.
- colostrum is the first food & the mother has collected over her life of how to fight against microbes is transferred immediately to her new born.
- Humans – small amounts of colostrum.

## Bovine Colostrum

- beneficial to child & adults.
- Cow – 36 L of colostrum i.e. 9 gallons.
- Can be transferred into all other mammals & is 4-times richer in immune factors than humans.
- Colostrum is safe for all ages. While compared to human colostrum bovine colostrum contains components such as immunoglobulin, Antibodies, prolin rich Polypeptide, lactoferin & glycoprotiens, which are instrumental in fighting viruses in the human body.
- growth factors present in bovine colostrum are identical to those of human colostrum. There are over 90 components in bovine colostrum. The primary components divided in to two classes are immune factor and growth factor, and colostrum also contains other nutritional components.

# BOOSTRUM

## IMMUNE FACTORS

- Immune factors in colostrum have been shown to help the body fight off harmful invaders such as viruses, bacteria, yeast & fungus. Each factor plays a specific role in our body's defense against these attackers. In addition, colostrum contains over 20 antibodies to specific pathogens including E-coli, salmonella, rotavirus, candida, streptococcus , staphylococcus , H.pylori & cryptosporidium.
- The other immune factors present in colostrum are Lactoferin, Transferrin , secretory component, Interleukins, Interferon, Lysozyme, oligosaccharides, Glycolipids and Lactoperoxidase.

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## LACTOFERIN

- An iron-binding protein & has antiviral, antibacterial, anti-inflammatory properties.
- treatment of diseases: cancer, HIV, herpes, chronic fatigue, Candida albicans & other infections.
- biological function: has a very high affinity for iron. It is because this action that lactoferin is an excellent inhibitor of a wide range of micro organisms that require iron for growth & proliferation.

## TRANSFERRIN

- similar to lactoferin in it's ability to bind iron and to act as an antioxidant.

## SECRETORY COMPONENT

- is associated with the immunoglobulin "IgA" and "IgM". It has also been suggested that it may possible exist in an unbound or free form.
- prostaglandin inhibitor, Anti inflammatory, Antimicrobial.

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## INTERLEUKINS

- Stimulators of the immune response by promoting proliferation and maturation of activated T cells.

## INTERFERON

- Antiviral , stimulators of immune response by modulating the activity of natural killer cells.
- The body produces interferons to help fight against disease and infection.
- There are three main types of interferons  $\alpha, \beta, \gamma$ . These groups of interferons work together to fight against bacteria, viruses, fungi, tumors and other foreign substance that may enter the body and it is used to treat various cancers, such as skin cancer, Kaposi's sarcoma, and hairy cell leukemia. It is also used treat viral infections, such as hepatitis, and genital warts caused by human papiloma virus (HPV).

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## LYSOZYME

- Anti-microbial. Lysozyme has a synergy effect with lactoferin.
- Lysozyme causes the lysis of the bacteria.

## OLIGOSACCHARIDES

- human milk contains more than 80 oligosaccharides.
- **Milk bathes** the gastrointestinal tract of the neonate & may provide to inhibit pathogen adhesion to the intestinal epithelium.
- inhibits adhesions by pneumococci or influenza virus to pharyngeal or buccal epithelial cells.

## GLYCOLIPIDS

- Various anti microbial and modulator functions.



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## LACTOPEROXIDASE

### ANTI- MICROBIAL.

- The Lactoperoxidase can work synergistically with lactoferin, Ig, growth factors and lysozyme.
- The Lactoperoxidase have no antimicrobial activity themselves but in the presence of the specific co-factors ( $H_2O_2$ ) they constitute an important defense system in liquid solution.
- It also inactivates the poliovirus, vaccine and HIV-I.

### PRP (PROLINE –RICH POLYPEPTIDE)

- Regulate the thymus gland & can stimulate weakened immune system, as well as balance an overactive immune system, as in the case of many auto immune diseases.

### LACTALBUMINS

- highly effective against numerous forms like cancer and viruses.
- Raise brain serotonin activity, reduce cortisol concentration and improve mood under stress.

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## CYTOKINES

- antiviral and antitumor activity and regulation and intensity of immune responses.
- Cytokines help increase T-cell activity and stimulate production of immunoglobulins.
- Interleukins have shown particular promise in fighting cancer.

## GLYCOPROTEINS

- Protect the immune and growth factors in colostrum from destruction by the digestive juices in the stomach and intestinal tract.

## GLYCOCONJUGATES

- similar to those in human milk & gives protection against by acting as competitive inhibitor for the binding site on the surface of intestine.

## XANTHINE OXIDASE

- Oxidizes bacteria through their ability to release hydrogen peroxide.



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## SIALYL-OLIGOSACCHARIDE & SIALYL -GLYCOCONJUGANT

- In colostrum & milk are regarded to be important biological component with respect to be source of brain ganglioside in infants.
- Have an immune function in the intestine.
- Involved in brain & nerve development & And in cell to cell recognition

## GROWTH FACTORS

- Colostrum is a very complex mixture containing many substances.
- growth (proliferation) and maturation of various cell types.
- growth factors stimulate muscle and bone cell proliferation and development.
- In addition to growth factors there are also cytokines present in colostrum. Two of these, interferon and interleukin were also included due to their growth promoting actions.
- help build and restore bone, muscle, nerve tissue, connective tissue, skin and cartilage .
- increase lean muscle, help the body burn fat for fuel , and assist in wound healing and slow the signs of aging.
- These are relatively stable to both heat and acidic conditions, hence they survive milk processing and gastric acid to maintain biological activity.

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- In colostrum the growth factors are
- Epidermal growth factor (EGF)
- Insulin like growth factor 1 & 2 (IGF)
- Fibroblast growth factor (FGF)
- Platelet derived growth factor (PDGF)
- Transforming growth factor (TGF)
- Insulin growth factor (IGF)

## EPIDERMAL GROWTH FACTOR

- EGF stimulate normal skin growth and repair cellular tissue & wound healing and maturation as the digestive tract and can be promoted with along with anti ulcerative.
- protecting and maintaining the skin.

## INSULIN-LIKE GROWTH FACTOR

- stimulate muscle and bone cell proliferation and development-helps to build muscle and strong bones.
- IGF-1 can retard the aging process including: decreasing cardiovascular associated mortality, reduce osteoporosis and have a very positive effect on brain function.
- IGF-1 is one of the only substances known to stimulate the repair and growth of DNA & RNA.
- IGF-1 has been clinically proven to help increase lean muscle mass & may help regulate blood sugar & cholesterol levels.

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## FIBROBLAST GROWTH FACTOR

- Stimulates muscle and bone cell proliferation and development.

## PLATELET DERIVE GROWTH FACTOR

- Stimulates the proliferation and development of a wide range of cell types.

## TRANSFORMING GROWTH FACTOR

- Mother – child, which help the infant to determine if foreign organisms are friends or foe.
- Transfer factors - small messenger molecules - transfer recognition signals between immune cells , thus “educate” native cell about the presence of foreign pathogens.
- TGF stimulates the proliferation of cells in connective tissue and assists in the formation of bone and cartilage. Used as a therapeutic agent in bone and wound healing . Repair tissue and support the development of growth of the living of the gut.
- Transfer factor cure the diseases ravaging the world population such as AIDS & Ebola.

## (IGF) INSULIN GROWTH FACTOR

- Stimulates tissue repair & wound healing & maturation of the digestive tract. (Anti -ulcerative).

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## IMMUNOGLOBULINS

- Immunoglobulin consist of immunity.
- Immunity: The state of protection towards infections diseases is called” immunity”. In immunity they are two types of functional systems.  
1) **Innate immunity;** 2) **Adaptive immunity**

## INNATE IMMUNITY

- The innate system is the first line of defense by which the host combats infectious agents and pathogenic microbes. This is non specific response.

## ADAPTIVE IMMUNITY

- The adaptive immune system produces a specific response in the form of antibodies to the infective agent that normally proves effective in neutralizing that agent.
- In adaptive immunity they are  
1) **Active immunity** 2) **passive immunity.**

## ACTIVE IMMUNITY

- This occurs when antigens stimulate the body to actively produce antibodies in a variety of ways. The active immunity is again divided into 1) **Infection & Recovery.** 2) **Vaccination.**

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## INFECTION

- Infection may be clinical –when there are obvious signs and symptoms of the disease. Not all infections produce long lasting immunity eg: cold. On the other hand life-long immunity may follow recovery from small pox, measles, yellow fever, etc.

## VACCINATION

- A vaccine is generic term for a preparation that produces active immunity. Vaccines may be bacterial or viral in origin.

## PASSIVE IMMUNITY

- In passive immunity the body does not produce antibodies. Antibodies from some other person or animal are injected into the individual.
- In passive immunity they are
  - 1) Inutero
  - 2) By administration of performed antibodies.

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## INUTERO

- Just before birth, antibodies from the mother's serum are passed through the placenta to the fetal side.
- The child at birth has a high antibody titer and therefore has acquired passive immunity which lasts for the first months (e.g. Baby has immunity to hepatitis virus).
- The passive immunity may be reinforced by antibodies passed to the child through the mother's milk. In the premature child this transfer of antibodies may not occur.

### BY ADMINISTRATION OF PREFORMED ANTIBODIES

- They are used, because in some diseases it is not always desirable to use vaccines. E.g. tetanus antitoxin is sometimes used after road accidents.
- Immunoglobulins have been shown to provide a superior defense in both treatment and prevention of viral infections, bacterial infections, allergies, fungus and yeast.
- Igs are present in the whey component of milk and in human serum and other tissue fluids. But the highest natural concentrations occur in colostrum.
- There are five types of Igs present in colostrum, specifically IgA, IgD, IgE, IgG, & IgM. Immunoglobulins are globulin proteins that function as antibodies.



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## IMMUNOGLOBULINS

- Immunoglobulin consist of immunity.

### IMMUNOGLOBULIN M; (IgM)

- IgM is a basic antibody that is produced by B cells, it found in the interstitium only in very low quantities. IgM is primarily found in serum.
- IgM antibodies are mainly responsible for the clumping(Agglutination) of red blood cells.
- Seeks out and attaches itself to viruses in the circulatory system.

### IMMINOGLOBULIN D; (IgD)

- Remove foreign substances from the blood stream.

### IMMUNOGLOBULIN E: (IgE)

- Its main function is immunity to parasites.
- it is capable of triggering the most powerful inflammation reactions.
- IgE may be an important target in treatments for allergy and asthma.

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## IMMUNOGLOBULIN G: (IgG)

- Bovine colostrum contains mostly IgG.
- In human colostrum - 2% IgG, while bovine colostrum - 8% to above 25%.

## IMMUNOGLOBULIN A: (IgA)

- Antibacterial, anti-inflammatory, and possibly as an anti-viral agent, found in relatively high concentration in bovine colostrum.

## NUTRIENTS

- In colostrum is also contains proteins, minerals and vitamins. Vitamins & minerals are nutrients that are essential for normal metabolism, growth & development.

## AMINO ACIDS

- Amino acids are required for growth & development.

## BIOACTIVE SUBSTANCES

### Nucleosides, Nucleotides & Nucleobases:

- are natural bioactive substances in milk & colostrum.
- BOOSTRUM not only act as metabolites but are also involves as bioactive substances in the regulation of body functions.
- Dietary nucleos(t)ides are found to contribute to iron absorption in the gut & to influence de-saturation of elongation rates in fatty acid synthesis in particular long-chain polyunsaturated fatty acids in early stages of life.

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## ESSENTIAL FATTY ACIDS

- It is life supporting & health promoting substance. In body essential fatty acids serve multiple functions. They are
- Affecting inflammation and many other cellular functions
- Affecting mood, behavior and inflammation.

## GLUTATHIONE

- Colostrum Is a source of wide range antioxidants. One such antioxidant –Glutathione and its precursors are present in colostrum in relatively high levels.
- Glutathione is a timer compose of three amino acid precursors-glycine, glutamic acid and cysteine. In this capacity glutathione & its precursors play an important part in colostrums role in overall health.
- Glutathione respective role is prevention of disease and the promotion of over all food health.
- Antioxidant - ability to neutralize unstable “free radicals” & are the causative agents of a number of disease conditions including cancer, heart disease, stroke and improper nervous & immune system function. And protect the DNA.
- Glutathione has also been described as having potent antiviral & Anti-bacterial properties, and has also been shown to have a wide variety of functions that help boost the immune system.

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## GENERAL USES

- Colostrum is presently used to treat a variety of diseases and disorders

### IN BACTERIA & VIRAL INFECTIONS

- BOOSTRUM is effective in reversing the inflammation of the digestive tract in HIV/AIDS patients caused by opportunistic infections.
- The antiviral, antifungal, and antibacterial properties of colostrum enable it to kill such pathogens as E-coli, candida albicans, rotaviruses and cryptosporidium ( a major cause of AIDS associated diarrhea.

### ALLERGIES & AUTO IMMUNE DISEASE

- The PRP in colostrum has been demonstrated to reduce or eliminate the pain, swelling and inflammation associated with allergies and auto immune diseases.

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## HEART DISEASE

- Recent researches suggest that cardiovascular disease may be caused in part by alterations in the patient's immune system. The PRP in colostrum may be able to reverse heart disease in the same way it counteracts allergies and autoimmune diseases. In addition, the growth factors and growth hormone in colostrum appear to lower the blood levels of "bad" cholesterol while raising the blood levels of "good" cholesterol. These growth factors also repair damage to heart muscle and support the growth of new blood vessels in the part of the circulatory system that surrounds the heart.

## CANCER

- The cytokines contained in colostrum have been a major area of research in seeking a cure for cancer. Researchers have found that the lactoferrin in colostrum has some anti-cancer activity. In addition, the combination of immune factors and growth factors of cancers.
- Phytic acid is a powerful antioxidant. Phytic acid is found in very high concentration in colostrum.... a specially formulated form of phytic acid called cellular forte with IP-6 is used to treat cancers of many types. One of its major effects is to prevent iron from reaching cancer cells. Its iron binding power is so great that it is also used to treat the iron overload disease "haemochromatosis".

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## OPEN WOUNDS

- The growth factors in colostrum have been found to stimulate the growth of new skin and to repair tissues damages by ulcers, injuries, burns, surgery, or inflammations. They are able to do this through their direct action on the cells DNA & RNA. Powdered BOOSTRUM has been used in topical preparations for gum disease, sensitive teeth, mouth ulcers, cuts and burns.

## OTHERS

- BOOSTRUM has successfully treated skin disorders, emphysema, baldness in males, anger out bursts, fever blisters, shingles, Tendinitis, thyroid disorders, gout, insect bites, vaginal yeast infections and Anemia.

## FOR ATHLETES

- Many people engaging in athletic activity find colostrum benefits helpful to improve performance. Body-builders like colostrum because colostrum has been shown to increase muscle mass.



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## IN INFANTS

- BOOSTRUM is high in carbohydrates, protein and antibodies and low in fats (as human new borns may find fat difficult to digest). New borns have very small digestive systems and colostrum delivers its nutrients in a very concentrated low-volume form. It has a mild laxative effect. Encouraging the passing of the baby's first stool, which is called meconium. This clears excess bilirubin, a waste product of dead red blood cells which is produced in large quantities at birth due to blood volume reduction from the infant's body and helps prevent jaundice.

## IN PREGNANCY

- It is safe to consume in pregnancy.

## WEIGHT LOSS

- The growth factor called IgF-1 that is contained in colostrum is needed by the body in order to metabolize fat. As humans grow older, their bodies produce less IgF-1. Their lower levels of growth factor are associated with a higher rate of type 2 diabetes in older adults & with increased difficulty losing weight in spite of exercise and careful diet. Will not cause weight loss, it appears to be a useful part of a weight reduction program because of its IgF-1 content.

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## LEPTIN

- Leptin found in mother's milk colostrum which increasing energy. Leptin deficient obese mice lost 40% of body weight after 1 month on Leptin & reduced diabetes, eventually becoming as lean as the most athletic mice while normal mice lost 12% of body weight Leptin was recently found to regulate at least six gene clusters, inhibiting fat production enzyme Acetyl 1-COA. Carboxylase reducing synthesis of fat cell, while improving fat burning in muscle cells.

## BOOSTRUM IN GINGIVITIS

- BOOSTRUM powerful bacterial factors have been shown to help prevent & treat gingivitis. BOOSTRUM can be applied for gum area just before retiring at night until it better & for dental pain after dental work.

## BOOSTRUM IN ARTHRITIS

- Naturally occurring sulphur compound such as glucosamine sulphate & MSM have a beneficial role to play in counteracting the crippling effect of arthritis. Colostrum is one of the richest known sources of there substance. Combine there with PRP in colostrum for its immune regulatory effects and we have an excellent treatment for arthritis.

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## BOOSTRUM AS ANTIBODIES

- Antibodies are very specialized molecules that are produced by the body's immune system.
- They are produced in response to the host being exposed to an immunogenic or foreign substance (antigen) such as an infectious microbe.
- Their action is to ward off and or neutralizes potentially disease-causing agents.
- A very important feature of antibodies is that they are directed specifically to their antigen that induced their formation.

## DRUG INTERACTION

- BOOSTRUM is an immune modulator.
- It can be consumed in any quantity without side effects or drug interactions.
- Although colostrum has no drug interactions, you may experience side effects from other supplements, herbs or medications you take that you never experienced before.
- Colostrum heals the bowel.
- This means you are better utilizing the nutrients from the food you eat as well as anything else you put in your body.
- Medications may need to be re-evaluated for dose and need by your medical professional.

# INDICATIONS

- HEART DISEASE
- CANCER
- OPEN WOUNDS
- FOR ATHLETES
- IN PREGNANCY
- IN INFANTS
- WEIGHT LOSS
- GINGIVITIS
- ARTHRITIS
- AS ANTIBODIES

# BENEFITS

- Supports normal immune system function.
- Combat bacteria & viruses.
- Enhance skin and muscle rejuvenation.
- Support joint and cartilage function.
- Build lean muscle mass.
- Metabolize (burn) fat.
- Enhance mood.
- Maintain healthy intestinal flora.
- Increases strength and stamina.
- Accelerate healing of injury or trauma.
- Improve nutrient uptake
- Balance normal blood sugar levels.

**DOSAGE:** OD/ BID before meals.

**Price:**180 /- per strip(1X10X1)