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# - Scientific Summary-

# COLOSTRUM

**HIGHLIGHTS**:

- Improves immunity
- Bone health
- Sports recovery
- Source of growth factor, IgG, IgE & lactoferrin

## SPORTS RECOVERY/LEAN MUSCLE MASS

When older adults took a colostrum supplement, there were improvements in their recovery and cognitive function. Both colostrum and whey protein groups improved upper body strength, muscle thickness, lean tissue mass, and cognitive function.
*The effect of bovine colostrum supplementation in older adults during resistance training.*
**Int J Sport Nutr Exerc Metab. 2014 Jun;24(3):276-85.**

Bovine colostrum supplementation maintained salivary testosterone concentration and modulated autonomic activity over consecutive days of competitive cycling. This pilot study provides justification to explore the effects of bovine colostrum on recovery in endurance athletes further.
*A pilot study: bovine colostrum supplementation and hormonal autonomic responses to competitive cycling.*
**J Sports Med Phys Fitness. 2013 Oct;53(5):490-501.**

Increased intestinal permeability has been implicated in various pathologies, has various causes, and can develop during vigorous athletic training. Colostrum is a natural supplement with a wide range of supposed positive health effects, including reduction of intestine permeability. This double-blind placebo-controlled study compared supplementation for 20 days with 500 mg of colostrum or placebo (whey). Results showed colostrum supplementation was safe and effective in decreasing of intestinal permeability in this series of athletes at increased risk of its elevation.
*Oral Supplementation with Bovine Colostrum Decreases Intestinal Permeability and Stool Concentrations of Zonulin in Athletes.*
**Nutrients. 2017 Apr 8;9(4).**

## IMMUNITY

Immunity-related disorders are one of the leading causes of mortality in the world. Bovine colostrum is rich in immunity, growth and antimicrobial factors, which promote tissue growth…and immune function in humans.
*Bovine colostrum: an evolving nutraceutical.*
**J Complement Integr Med. 2015 Sep;12(3):175-85.**

Bovine colostrum has been advocated as a nutritional countermeasure to exercise-induced immune dysfunction and increased risk of upper respiratory illness (URI) in athletic populations. During winter months, under double-blind procedures, 53 males were randomized to daily supplementation of 20g of

colostrum or placebo for 12 weeks. This is the first study to demonstrate that colostrum limits the increased salivary bacterial load in physically active males during the winter months which may provide a novel mechanism of immune-modulation with colostrum and a relevant marker of in vivo (innate) immunity and risk of upper respiratory tract infections.
*Effects of bovine colostrum supplementation on upper respiratory illness in active males.*
**Brain Behav Immun. 2014 Jul;39:194-203.**

Bovine colostrum has been advocated as a nutritional countermeasure to exercise-induced immune dysfunction. In a randomized double-blind, parallel group design, participants [age 28 ± 8 years] were assigned to 20 g per day of colostrum or placebo for 4 weeks. Results show evidence of the beneficial effects of colostrum on receptor-mediated stimulation of neutrophil oxidative burst in a model of exercise-induced immune dysfunction.
*Influence of 4 weeks of bovine colostrum supplementation on neutrophil and mucosal immune responses to prolonged cycling.*
**Scand J Med Sci Sports. 2015 Dec;25(6):788-96.**

**BONE HEALTH**

Research study suggesting colostrum prevents bone loss, and may have a role in osteoporosis prevention.
*Protective effects of bovine colostrum acid proteins on bone loss of ovariectomized rats and the ingredients identifications.*
**Mol Nutr Food Res 2011 Feb;55(2):220-8.**

**OTHER COLOSTRUM STUDIES:**

Therapeutic potentials of bovine colostrums.
Indian J Pediatr. 2005 Oct;72(10):849-52.

Composition and clinical use of bovine colostrums.
Vopr Pitan. 2012;81(3):35-40.

Bovine colostrum as a biologic in clinical medicine: a review - Part II: clinical studies
Int J Clin Pharmacie Ther 2008 May;46(5):211-25.

Colostral proline-rich polypeptides - immunoregulatory properties and prospects of therapeutic use in Alzheimer's disease.
Curr Alzheimer Res. 2010 Jun;7(4):323-33.

Exercise and exposure to heat following bovine colostrum supplementation: a review of gastrointestinal and immune function.
Cell Mol Biol (Noisy-le-grand). 2013 Nov 3;59(1):84-8.