

WAGAWHEY



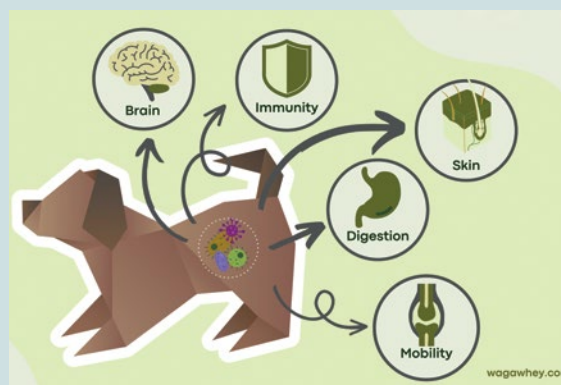
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# Wagawhey

The powerful potential of Lactoserum: the “whey” forward for your dog’s gut health.

**G**ut health is gaining momentum as one of the hottest topics in human health research today. Over the past decade, our understanding of how gut health impacts our overall health has driven a shift toward a more holistic approach to treatment. This approach can potentially address countless mental and physical health challenges previously treated in isolation.

At the core of this new understanding is that our gut health relies mainly on the amount and ratios at which specific microorganisms are present in the lower intestinal tract. This unique ecosystem of microorganisms was strategically named the gut “microbiome” in 2001.



**“This gut dysbiosis has a profound effect on the gut itself”**

## THE GUT-BRAIN-SKIN

This gut microbiome plays an integral role in the communication pathways between the brain and the gut. The microorganisms produce neurotransmitters that initiate hormonal signalling cascades in the brain. These hormones bring about systemic biochemical changes throughout the body, invoking the capacity to protect against diseases and other imbalances via the gut-brain axis.

Furthermore, the health of our skin relies on a separate but interconnected microbiome. These beneficial microorganisms can communicate with the gut microbiome via the gut-brain-skin axis. Similarly, the skin microbiome communicates perceived stimuli to the

brain, which induces biochemical changes in the gut and, ultimately, the skin. This remarkable communication strategy allows our skin to serve as the body’s first defence against infections and harm from our physical surroundings.

Conditions that alter the composition of our gut microbiome can induce a so-called gut dysbiosis. This gut dysbiosis has a profound effect on the gut itself and has been implicated in numerous mental health problems, compromised immunity, skin ailments, digestive issues, challenges in weight management, diabetes, and the progression of neurodegenerative diseases.

## GUT HEALTH IN DOGS

Close human contact and an ever-changing diet more similar to their human counterparts dramatically impacted the canine gut microbiome. When exploring the dominant microbial strains in their gut, researchers found that dogs lost six bacterial genera through domestication from wolves and gained five genera that they have in common with humans. The domestic canine gut is more similar to that of humans than many other mammals.

Given the close co-evolution between humans and dogs, it is no surprise that our canine companions often suffer from similar gut-related ailments that we do. In veterinary research, evidence is also starting to emerge that mirrors that of the human microbiome's role in disease prevention and treatment.

Some of the most devastating and stubborn health challenges that dogs and their owners face are caused by skin ailments. Among those is Atopic dermatitis (AD) which presents as pruritic, inflamed, and irritated skin (including eczema). Canine AD (cAD), although highly common among domesticated dogs, is a persistent, chronic inflammatory skin condition. It requires



ongoing medical intervention to maintain a reasonable quality of life for those affected. Although certain breeds are more prone to develop cAD, symptoms are exacerbated by airborne irritants, secondary yeast or fungal infections, and dietary allergies.

As expected, the skin microbiome in dogs suffering from cAD is altered, but more recently, research revealed that the gut microbiome shows significant changes due to cAD as well. Remarkably, faecal transplants from healthy dogs effectively healed cAD by restructuring the gut microbiome profile of dogs with cAD to a healthy state.

These findings propose that some skin ailments could be effectively treated through gut health intervention alone, similar to earlier results in human studies.

The link between canine gut dysbiosis and several other typical diseases is also becoming clearer. For example, dogs suffering from osteoarthritis had a unique microbiome profile compared to healthy dogs, much like the findings in human studies that implicated a low level of chronic inflammation as a potential cause.

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## IMPROVING CANINE GUT HEALTH: WHERE TO START?

Genetic predisposition, antibiotics treatments, poorly balanced diet, and certain diseases contribute to gut dysbiosis in dogs with numerous widespread disease repercussions. To remedy this, various gut support supplements are becoming available, with varying degrees of success. Probiotic supplements are known to play an important role in supporting microbiome management, but there is a new kid on the block when it comes to achieving gut health.

Truthfully, it's not new at all. It has been used as a health-promoting liquid for centuries! It is what we commonly know as whey protein.

Before whey protein became well-known for



its role in the muscle and body-building world, the mechanisms of its range of health benefits were poorly understood. Unfortunately, the quality and purity of whey products vary tremendously, and consumers are not always aware of these differences. Furthermore, a whey product label may promise the presence of highly beneficial peptides and enzymes within the product, but their bioavailability to consumers may be limited.

As new research is continuously emerging, whey is quickly climbing the ranks as a supplement powerhouse with health benefits that far outreach muscle building when taken in its purest form: Lactoserum.

## WHAT IS LACTOSERUM?

During the initial stages of cheese making, rennet, an animal-sourced digestive enzyme isolate, is added to milk. Lactoserum, or cheese whey, is a by-product of this natural cheese-making process. Its main components are 70% lactose, 14% whey proteins, some residual fats, and minerals.

Along with its unique microbiome, lactoserum is particularly interesting for its unique protein content. More specifically, its protein content comprises a wide range of bioactive peptides and enzymes. Many of these peptides remain intact when ingested and passed through the stomach and small intestine, only to unleash their gut-healing goodness in the large intestine.

Lactoserum's potential as a gut health super-supplement. In the context of gut health, some of the most important lactoserum peptides to consider are lactoferrin (Lf), immunoglobulins (Igs), glycomacropeptide (GMP), lactoperoxidase (Lp), and sphingolipids. These peptides fulfil a complex interconnected range of functions that impacts gut wellness in several ways. Here are some of the numerous ways in which bioactive peptides support gut health:



### NATURAL ANTIBIOTIC

Among the many natural antibiotic peptides in lactoserum, Igs can bind toxins from harmful gut bacteria. This alleviates the symptoms of infections like diarrhoea and dehydration without traditional antibiotics.

Furthermore, Lf sequesters iron from iron-hungry pathogenic bacteria while simultaneously making Lf-bound iron available to beneficial bacteria, shifting the population ratios to benefit the gut.

### PREBIOTIC

Prebiotics do not contain live microbial strains to promote gut microbiome health, but rather they provide a nutrient source to the beneficial microbial strains already present in the gut, allowing them to proliferate. Not only is the main carbohydrate in lactoserum, lactose, a powerful prebiotic, but Lf possesses such prebiotic qualities as well. These compounds support the development of Bifidobacteria and Lactobacilli, which are integral strains in maintaining a healthy gut. Along with several non-carbohydrate components of whey protein, calcium in lactoserum further serves as a powerful prebiotic in the gut.

### ANTIOXIDANT AND ANTI-INFLAMMATORY ACTION

Many metabolic reactions in the body produce potentially harmful free radicals like reactive oxygen species (ROS). The body's antioxidant systems readily disarm these ROS. However, in a state of dysregulation between excessive ROS species or depleted antioxidants, free radicals can accumulate and cause inflammation that lies at the root of countless diseases.

One of the key role players in antioxidant homeostasis is

## WAGAWHEY

Glutathione (GSH), a powerful ROS-quenching antioxidant produced within the body. The amino acid cysteine is one of the most prominent rate-limiting precursors to the production of GSH and is abundantly available among lactoserum protein constituents. It has been shown that treatment with hydrolysed whey peptides could increase GSH levels by more than 60%, thereby dramatically increasing antioxidant activity.

Furthermore, one study identified 8 lactoserum peptides with anti-inflammatory activities, of which 2 were not previously identified.

Given the availability of these and many other potent antioxidants in lactoserum, it can be utilised as an effective anti-inflammatory that can promote gut health and prevent downstream diseases naturally.

### IMMUNE-SUPPORT

Igs, Lp, and Lf all contribute to elevating immunity. This is partially achieved by shifting the microbiome profile to promote the growth of beneficial microbes through the targeted natural antibacterial activity of Lp and Lf, while Igs simultaneously bind toxins produced by gut bacteria.

Not all whey products are created equal. The term “functional food” refers to food that provides health benefits that transcend its nutritional value alone. Depending on the production method, lactoserum can act as one of these highly beneficial functional foods.

Unfortunately, in many cases, the functional qualities of lactoserum are lost during the production process on a large scale. Lactoserum often undergoes ultrafiltration or heat treatment when production requires a product with a higher protein content. Many of these processes remove some of the bioactive enzymes and carbohydrates, thereby inadvertently removing the functional capacity of these peptides and, ultimately, the remarkable additional health benefits of lactoserum.

### THE FUNCTIONAL GOODNESS OF WAGAWHEY FOR YOUR DOG'S GUT HEALTH

Wagawhey is a 100% naturally derived lactoserum powder containing all the enzymatic goodness for gut health support.

From the initial stages of the cheese-making process, Wagawhey ensures the integrity and stability of the renneting process to enhance the bioavailability of the enzymes in the lactoserum. This unique addition makes the beneficial compounds more readily absorbed by your dog's digestive tract.

The natural hydrolysis of the original whey protein is followed by dehydration for ease of use as a powder. Adding clean, cool water activates the anti-inflammatory, prebiotic, and immune support superpowers of lactoserum for your dogs.

### TAKE HOME MESSAGE

A healthy gut and skin microbiome is the foundation of holistic health for our canine companions and us. Genetics, diet, and various health challenges can exacerbate a state of gut dysbiosis with numerous health repercussions, including persistent, pruritic skin ailments.

Lactoserum, commonly known as whey, naturally contains a range of bioactive peptides and enzymes that can dramatically improve the gut and skin microbiome of dogs suffering from a wide range of diseases, including atopic dermatitis. Wagawhey is an all-natural lactoserum powder with gentle but powerful bioactive enzymes supporting canine gut health. Researched and written by Kari du Plessis (PhD) for Wagawhey.

Due to the excessive research done for this feature, if you would like to see the specific literature used, please get in touch with [bark@editiondog.com](mailto:bark@editiondog.com) for the full list. 🐾

