

# Duralactin® the inflammation tamer

## Duralactin® helps manage inflammation — the key to complete joint health.

Equine joint problems have many causes, but treatments can be incomplete.

- \* Glucosamine and chondroitin sulfate – strengthen cartilage and tissue
- Steroids or NSAIDs – treat inflammation, but can have troublesome side effects

### Duralactin products are different

Duralactin is more than a simple joint supplement; it helps reduce inflammation throughout the whole body. Only Duralactin products contain MicroLactin® to support joint health *and* help tame inflammation.



## INFLAMMATION

can be found throughout the body.

### SYMPTOMS ARE:

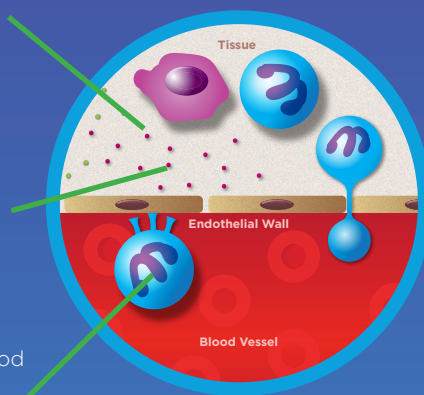
- HEAT
- SWELLING
- LOSS OF FUNCTION
- REDNESS
- PAIN

## Treating inflammation is important

Inflammation is the body's normal response to damaged tissue and the presence of harmful organisms.

While the function of neutrophils is important to recovery from infection, the cells can also attack healthy tissue, leading to chronic inflammation and pain.

Neutrophils, the white blood cells that the body uses to fight infection, release substances to destroy the source of the infection and tissue damage.

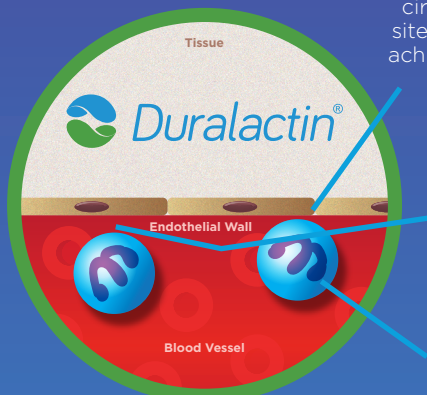


## MicroLactin, the unique ingredient in Duralactin products, tames inflammation

It blocks the entry of neutrophils from the circulatory system into the site of tissue damage. This is achieved by helping maintain tight cell junctions!

It inhibits and reverses neutrophils from attaching to the endothelial wall.<sup>2,3,4</sup> This is done via its effects on the CD18 Glycoprotein complex on the surface of the neutrophil.

As a result, neutrophils remain in the bloodstream and do not increase inflammation.



MicroLactin also helps maintain the proper action of macrophages,<sup>5</sup> cells that form in response to inflammation, and help build the immune response.

**The benefits of Duralactin<sup>®</sup> products**

- More than a joint supplement — help reduce inflammation throughout the body
- Contain MicroLactin<sup>®</sup>
- Can be used as part of combination therapy — to treat joint health and inflammation
- Ideal for long-term use with minimal side effects
- Suitable for high-risk animals
- Easy once-a-day dosage, with no loading dose, helps improve owner compliance
- Horses readily accept Duralactin pellets, making administration easy
- Specific formulations for equine
- Backed by scientific studies <sup>6,7</sup>

To find out more about Duralactin products to help tame inflammation and maintain joint health, contact your sales representative or visit [duralactin.com](http://duralactin.com).

## The Duralactin Equine Family of Products


**Duralactin<sup>®</sup> Equine Pellets (1.875 lb bag)**

- MicroLactin<sup>®</sup> 7,000 mg
- Zinc 15 mg
- Manganese 8 mg

**Duralactin<sup>®</sup> Equine Joint Plus Pellets (3.75 lb bag)**

- MicroLactin<sup>®</sup> (dried milk protein) 7,000 mg
- Glucosamine HCl (marine source) 900 mg
- Chondroitin Sulfate (poultry source) 300 mg
- Ascorbic Acid (Vitamin C) 50 mg
- Zinc 15 mg
- Manganese 8 mg

This product has not been approved by the FDA nor is it intended to diagnose, treat, cure, or prevent any disease. Should only be used through consultation of a veterinarian and in conjunction with an overall wellness program.

**References:**

1. Stelwagen K, Ormrod DJ. An anti-inflammatory component derived from milk of hyperimmunized cows reduces tight junction permeability in vitro. *Inflamm res* 1998;47:384-388.
2. Woodman R, Fuhrer P, Beck L, Kubes P. The effects of hyperimmunized milk factor (HIMF) on neutrophil adhesion in vivo. Abstract, Society For Leukocyte Biology, 29th National Meeting, Charleston, SC, 1992.
3. Beck, LR and Fuhrer PF. Milk lymphocyte anti-adhesion factor and its role as an anti-microbial. Proceedings Indigenous Antimicrobial Agents of Milk - Recent Developments. Uppsala: *Int. Dairy Fed.* 1994;62-72.
4. Beck, LR, Fuhrer JP. Anti-inflammatory factor, method of isolation, and use, US Patent #5,980,953. Nov 1999.
5. Wilborn WH, Hyde BM, Beck LR, Fuhrer JP. Milk from Hyperimmunized Cows Stimulates Lysosomal Activity in Rat Lung Macrophages. Abstract: The 1999 Lovelace Respiratory Research Institute Symposium on Respiratory Immunology, Santa Fe, NM. October 1999.
6. Bello TR, Allen TM. The use of MicroLactin<sup>®</sup> for inflammatory conditions in equine veterinary practice. *J Eq Vet Sci* 2005; 25,9: 379-382.
7. Data on file.