

## Stimulate the skin metabolism

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Hair loss, a brittle and dull coat are the symptoms. Feeding errors are often the cause. A horse with a healthy and balanced intestinal flora produces biotin itself! A permanent, concentrated supply of synthetic biotin via the feed is now viewed critically: the body unlearns to produce biotin if it is permanently added artificially to the feed. In contrast, the body's own production can be easily stimulated, for example by adding feedstuffs such as brewers' yeast in combination with spent grains (**Leiber YeaFi® BT**) or pectin-rich beet pulp (**Leiber YeaFi® AB**). They are a nutrient substrate for the microbiome. The better the microflora can work, the better the body's own biotin production runs.

This is particularly important in older horses, where the microflora in the gut is often already very sluggish. But also in young horses, in which the microflora is not yet fully mature. Horses with metabolic disorders (Cushing, EMS), which often have a severe imbalance in their microflora, or horses whose microflora has been negatively affected by stress factors such as worming, antibiotics, or medication, also benefit from the effect of brewers' yeast. These horses often need to build up a positive intestinal flora before the body's own production of biotin can start. Brewers' yeast can decisively support this build-up process.



### Can the skin be influenced by feeding?

Yes, in addition to biotin, attention should be paid to the intake of the following ingredients:

- | **Vitamin A** as an epithelial protection vitamin is not only an important element for the skin, but also for the mucous membrane and is often already sufficiently contained in mineral feed or mineralized muesli and pellets.
- | **Zinc** is indispensable in many enzymes of the carbohydrate and protein metabolism, especially for the formation of new skin and hair cells. Zinc is therefore often a component of ointments. A zinc deficiency can be recognized by the bumpy and thick skin and often also by extreme formation of dandruff. ATTENTION: an oversupply of zinc should be avoided. Pay attention to the zinc-copper ratio.
- | **Proteins**, amino acids, especially sulphur-containing amino acids such as methionine, but also lysine and tryptophan, are responsible for healthy skin and good hair growth. Brewers' yeast in particular has a very good protein quality with an excellent amino acid pattern.

### More than 70% of the immune system are located in the gut

In addition to the positive effect of brewers' yeast, in combination with spent grains (**LeiberYeaFi® BT**) and/or unmolassed beet pulp (**Leiber YeaFi® AB**), on the microflora, these components can also have a positive effect on the immune system. The so-called lymphatic tissue is located in the intestine and is (partly) responsible for the immune system. Microbes can produce so-called SCFA (short-chain fatty acids). In addition to propionate and acetate, this also includes butyrate. These metabolites fulfil important tasks. They serve as energy suppliers for the intestinal mucosa, among other things. This not only

serves as the first barrier against infections, it is also in direct contact with the immune system. Brewers' yeast promotes the production of SCFA and thus intestinal health and the immune system.

Thus, a balanced diet can strengthen the skin from the inside out through feeding.

#### Leiber YeaFi® product benefits:



optimizes body condition (body condition score – BCS)



improves coat shine and coat change



supports fertility and reproduction rate



easy handling, dosing, and storage

### The skin, the horse's largest sensory organs

Skin disorders such as redness, itching, rashes, and even hair loss are very common in horses. Skin problems in horses are often the result of feeding errors, poor hygiene, medication intolerance, or external effects such as the bite of blackflies in the case of sweet itch. Skin that is already damaged is much more susceptible to further illnesses, as the skin can no longer fulfil its multi-layered functions (above all its protective function).



## The skin performs a variety of tasks:

- | **Protective function:** dirt, dust, mechanical damage, sun, parasites, et cetera
- | **Sensory organ:** external stimuli such as heat, cold, itching, and also pain
- | **Temperature regulation:** heat is released through sweat. For example, a horse weighing around 600 kg produces up to 12 litres of sweat during medium work. This not only means a loss of fluids for the horse, but also a loss of electrolytes, which must be compensated through feeding.
- | **Exchange of metabolic products:** potassium, sodium, chloride, calcium, magnesium, uric acid, and proteins are released via sweat. Vitamin D from sunlight, on the other hand, is absorbed by the skin, for example.
- | **regulation of the water balance**

## A hair develops from every hair follicle

The hair, together with the hair follicles, hair glands, blood vessels, and nerves, are located on the so-called dermis. The sebaceous glands end in the follicles. These produce oily and antibacterial sebum, which protects the skin. At the same time, each hair is also connected to the muscle via the follicle. This allows the horse to raise its hair when it is cold or lay it down when it is warm. If a horse receives too few vitamins, trace elements and minerals, or an unbalanced diet, these deficiencies are often reflected in skin and/or coat problems.

## Brewers' yeast – ideal for skin and hair

Brewers' yeast products provide valuable nutrients and active ingredients for skin metabolism. They also support digestion and thus the body's own production of water-soluble vitamins such as biotin.



You want to know more about production, differences, effects, and practical use?

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