

## A sound intestinal flora - more than just a good gut feeling

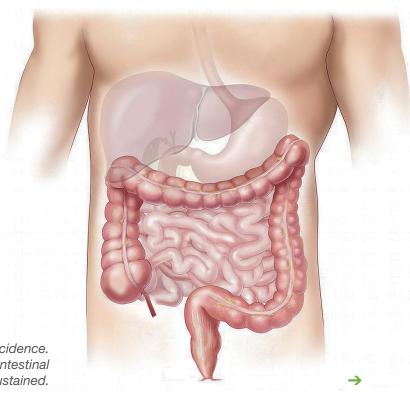
Already in the year 300 BC Hypocrates explained, "A healthy intestine is the root of all health." In addition to his function in the absorption of water and nutrients, the intestine is an important element of the immune system.

More specifically, it is the intestinal flora that actively supports the immune system. This is also called intestinal microbiome or microbiotics and represents the entirety of microorganisms in the intestinal tract. The intestinal flora digests heavy nutrients and in return preserves its optimal living conditions (temperature, pH). At the same time, the microbiome is involved in the development of the host-specific immune system.

The bacterial colonization, of the till birth more or less still sterile intestine, takes place for the first time short after birth by vaginal and environmental germs. There are indications that mechanisms exist which abrogate an inflammatory defense reaction for this periode so that a stable intestinal environment can be formed. By supplying colostrum, the newborns receive important anti-bodies to build up a stable microbiome (= eubiose). Over time, the intestinal flora develops individually, dependent on maternal effects, age, feed, hygiene, diseases and their treatment.

## Which effects influences the composition of intestinal microbiotics?

There a lot of of factors that have a lasting influence on the intestinal flora. In the context of our livestock, it is on the one hand the weaning stress, which can lead to morphological and physiological changes in the digestive tract. This can affect the equilibrium of pathogenic and non-pathogenic intestinal bacteria (= dysbiosis).



A healthy intestine is no coincidence. Through targeted support of the intestinal flora, a healthy microbiome can be sustained. On the other hand, antibiotic treatments also alter the intestinal flora, as they inhibit only gram-negative or gram-positive bacteria, depending on the group. In addition, anti-biotics are non-selective and thus kill both useful and useless bacteria.

Likewise, the feed composition can affect the intestinal flora. For example, high raw fiber feed contents cause an increase in cellulose metabolizing organisms.

## How can the microbiotics in the intestine be naturally supported?

Normally pathogens enter the organism regularly. However an excessive number of pathogens or defensive malfunction may lead to dysbiosis. This, as well as the release of endotoxins from decomposed bacteria, leads to inflammatory reactions, which weakens the intestinal barrier and facilitates the passage of pathogenic germs into the blood. In addition to the use of WH67® EG02, the addition of EVO-SAR is also suitable for inhibiting gram-negative and gram-positive bacteria.

WH67® EG02 forms a protective film on the intestinal mucosa and herewith reduces the occurrence of inflammations. So pathogens and their toxins can be inhibited. The degeneration of gram-negative bacteria releases endotoxins (lipopolysaccharides). WH67® EG02 is able to neutralize these endotoxins and excrete them. In this way, the passage of endotoxins into the



bloodstream can be minimized.
Thanks to the effective combination of active ingredients, EVO-SAR is able to penetrate gram-positive bacteria and to dissolve their cell wall from the inside. Herewith the immune system is strengthened and infections can be prevented.

The combination of both products can also enhance a proper eubiosis and naturally improves the health and performance of farm animals.

The humic acids of **WH67**® **EG02** as well as the plant extracts and fatty acids of **EVO-SAR** support the intestinal flora in a natural way.

