



Nutrition and



diseases

■ by **Domenico Bergero, Cynthia Préfontaine**
photos by TuttoArabi Archive

The first requirement of an adequate nutrition is that it should not harm the horse. This sounds like stating the obvious, but in many situations, an incorrect nutrition can impair the quality of the performance and become a serious cause of often dangerous problems. Many nutritional errors are also at the basis of some well known issues, such as some types of colics, laminitis, some growth pathologies and heaves.

Colics

The term “colic” denotes a pain in the abdomen, often caused by the intestine but also by other causes. Colic is a local pain that can be felt in the digestive, urinary or genital system.

There are many factors that can cause an intestinal colic, but often these are due to the wrong type or method of nutrition.

First of all, it is necessary to establish a feeding plan and an exercise plan that is suited to the animal’s abilities. Using good quality food and appropriate quantities is important to ensure the horse’s wellbeing, but we must remember that the price does not necessarily reflect the quality of a product. Using very expensive food does not mean removing the problem of colics. The quantity must be determined according to the stable and sports needs of the various horses.

For this reason, it is advisable to put up a sign on the door of the loose box showing the quantity of food to be administered, and to have 3 or more types of foods available at the stable so that you can carefully mix them and administer them. The daily amount of food must be split into several daily meals, because the risk of a colic can increase dramatically if the intestine does not receive food for more than eight hours.

Sudden and unexpected changes in food type and concentration must be avoided at any cost, because this alters the balance in the intestine and makes the horse more susceptible to extremely dangerous bad fermentations.

Also, giving too much fresh fodder to horses that are not used to it can be harmful: horses that live in a loose box and are suddenly left free to graze in a field often suffer from gas colics.

Therefore, it is always best to choose a good quality hay that does not include external material such as leaves



and twigs and that has been cut from appropriate meadows. Finally, it is recommended that horses are fed at regular times, given adequate exercise to fight stress, annual checks of their teeth and six-monthly checks (at least) for intestinal parasites are planned.

Laminitis

Laminitis is a disease that can be defined as secondary to various causes, which can be attributed to just one phenomenon: the elimination of toxins and their passing into the blood stream. These toxins are very dangerous and can cause complications in kidneys, heart, intestine and hoofs. Exactly at this level, toxins cause blood to clot within the smallest blood vessels, blocking the normal flow of oxygen and nutrients to that region.

Toxins in circulation can come from a hotbed of infections, can be released during a particularly difficult foaling or one that had not been perfectly carried out, but more often than not toxins are released into the horse's large intestine when the digestive system is not working perfectly. Many colic cases, for example, are caused





by toxins that lead to laminitis; the same problem can arise in every case where the “good” micro-organisms are not very active, due to an ongoing use of antibiotics, a sudden change in pasture, use of altered foods or because the horse is overfed, a very frequent case.

Given its food-related cause, sudden changes in the feeding regime are dangerous and can cause laminitis: in this case, the micro-organisms find themselves dealing with substances they are not used to and can be harmed by them. Many of them will die, releasing toxins usually contained within their bacterial body. For this reason, changes in the accommodation are often risky, for example moving stables to take part in a competition.

Another prime factor is overfeeding, particularly the excess of concentrates whereby large quantities of undigested starch arrive in the large intestine, with considerable consequences.

Equally risky is also allowing the horse to eat too much grass that is still fresh, as it is often the case when grazing during springtime.

Other causes, perhaps less frequent ones, are those directly or indirectly correlated with nutrition. Laminitis can arise when a horse drinks too much cold water





after a long workout (in which case the normal bowel activity is altered but the effect for the microorganisms is truly harmful) or when the horse eats food containing toxic ingredients.

A correct management of the feeding process is the way to prevent this disease. Therefore, it is necessary to avoid sudden changes in pasture, excesses of concentrates, particularly cereals, and very rich meadows in the springtime (in which case, in order to get the horses to graze safely, the land can be divided into smaller plots, so as to control the quantity of grass eaten every day). When horses must change accommodation, have to stay in unknown stables to take part in competitions or when it is compulsory to change their food, it is advisable to use (as mentioned above) compounds that have a positive effect on micro-organisms: yeast, good hay and, more generally, probiotics and prebiotics.

Osteochondrosis

Osteochondrosis is the most widely known of a series of diseases that are collectively identified as "orthopedic growth diseases". Apart from horses, osteochondrosis can affect many other animals but the majority of studies have been conducted on men and on dogs, where the large-size breeds are affected.

Osteochondrosis is an unusual formation of a cartilage, which should evolve into a bone tissue (ossification). Particularly affected are the conjugation cartilages, which are necessary for the bones to grow. Depending on the bone, the area affected, the entity and type of

damage, this disease can manifest itself in different forms and can be called with different names: falling into this group are some types of bone cysts, epiphysitis, some deformations of the joints and even an irregular gait attributable to a defective development of the vertebrae in the neck.

Among the factors contributing to the onset of osteochondrosis, the type and entity of the lesions, food is undoubtedly the most important one. Numerous excesses, absences and imbalances can in fact lead predisposed horses to develop defects, sometimes serious ones. It is not by chance that this is one of the aspects that has been researched the most. Among the nutritional causes of osteochondrosis, particularly worth mentioning are excesses, i.e. too much proteins, too much sugar, especially starch, can fast-track the onset of the disease. So be careful with too much concentrate, especially in colts and fillies growing fast!

Many mineral imbalances have obviously been associated with the onset of osteochondrosis: too much calcium, phosphorus, lack of copper and zinc.

Also the timing and methods of administering food seem to have an effect: too abundant a meal is very dangerous in this sense.

Good food reduces the incidence of diseases in general, but can also help decrease the seriousness of the damage, resulting, for example, in a less frequent use of surgery. For this reason, it is always very important to prepare balance feeding plans. In any case, a regular growth of bones in a colt or a filly started in the dam's womb, the-

before the food given to the mare must also be adequately accurate, especially in the last 3 months of foaling and during lactation.

Among breeders, the most frequent advice given in relation to food is varied and often contradictory. In many cases, the colts affected are simply kept in their loose box and fed with just hay for some time (sometimes months). Other times concentrates are decreased, whereas some people say that it is necessary to increase the quantity of protein rather than decreasing it. Reference to minerals is rare, even though they play a fundamental role.

In general, we can say that the horses affected by this disease must be fed with balanced diets, not too much food and with some fibers, so the quantity of proteins and of concentrates must be changed. The practice of stopping concentrates altogether leads to a depleted growth but can also cause imbalances that result in future problems. This methods should therefore be reduced to a minimum.

Heaves

Another potential food-related problem is heaves, a word that generates fears in every horse lover. Heaves,

more appropriately called "chronic obstructive pulmonary disease" (COPD) is a disease of allergic nature, caused by the presence of mold spores in the air.

These spores can often be found in the area of the loose box, in moldy hay or straw. Over time, the horse becomes sensitive to the spores, which trigger a change in the bronchus and lungs: the former shrinks whereas the latter lose their elasticity and functionality. The horse ends up coughing, breathing with difficulty and not having an adequate fitness level: as the functionality of the lungs decreases, the organism and the muscles receive less oxygen.

Preventing this is easy: only use non-moldy hay and straw, ensiled or fresh foodstuffs. This works perfectly, as proven by the fact that COPD is virtually unknown among wild horses and those roaming freely on meadows.

As for therapy, there are various options, depending on the level of severity and the athletic demands made to the horse. In any case, getting rid of the cause, i.e. moldy food, is the most important step to take. □

