



The diagram shows a representation of a joint. You can see the bone covered in cartilage, which should be slippery with little friction as a result. Surrounding the joint is the synovium (also known as synovial membrane) which secretes clear joint fluid. This is like oil that protects and lubricates the joint. Surrounding the synovium we have the joint capsule to keep this environment separate. Surrounding a joint are ligaments which keep the bones in alignment.

This system works very well until some damage occurs. When the cartilage is damaged either through wear and tear or trauma, this causes pain. The bone under the cartilage is very sensitive and any abnormal loading or contact can lead to excruciating pain in some cases.

WHAT IS JOINT DISEASE?

When the joint is inflamed we call it 'arthritis'. Mechanical factors cause the synovium to become inflamed, leading to less lubrication and eventually leading to cartilage breakdown. At the same time, enzymes are released which further damage the cartilage. Once the process has started, it cannot be reversed.

Treatment is aimed at slowing the cycle of cartilage damage and controlling the pain that is associated with the damage.

TREATMENTS

One of the most common treatments is the injection of products into the joint (e.g. steroids to reduce the inflammation) but this can be expensive and is not risk free. There is a risk of introducing infection which could require surgery to treat. We can use oral anti inflammatories and occasionally joint supplements but response to treatment seems to vary from case to case. It is often a 'try it and see' approach that is taken to control the condition as much as possible. Systemic medications that directly affect bone turnover can also be used.

OTHER JOINT PROBLEMS

We have described the basic model of arthritis development but there is another joint condition that can rapidly lead to arthritis in young horses. This is called 'Osteochondrosis'. This is caused by malformation of the cartilage leading to cracks appearing that can eventually break off and 'float free' in the joint. When this happens it is called 'osteochondritis dissecans' (OCD) and can be a career ending condition if not recognized promptly. Surgery is usually required to remove the fragment and clean up the remaining cartilage covering the joint. Fibrous (scar) tissue covers the defect to produce 'fibro-cartilage' but this is not as good as genuine cartilage and so can lead to early formation of arthritis as described above.

OVERVIEW

Arthritis is a challenging disease to treat and manage but a lot of horses do 'OK' with minimal pain relief. You may have to change how you ride or manage your horse and although it can end competition careers, it doesn't always mean you cannot use your horse.

Treatments such as corticosteroids or Phenylbutazone always have side effects and these need to be weighed up against the potential benefits they can provide. Joint supplements can be useful but it is always recommended to use a product from an established and reputable company.

General causes of arthritis

- Wear and tear e.g. age related change.
- Incorrect wear and tear e.g when joint is poorly conformed.
- Infection of joint e.g. septic joint as a foal.
- Ligament damage, especially if joint is unstable.
- Cartilage malformation such as in cases of OCD.