

Dog Joint Mobility.

As we age our **joints** become a little **less flexible** and sometimes **painful and aching**. This is also very true for our **dogs**, and can affect **over 50% of dogs aged 7 or more**.

Articulated (or movable) joints are enclosed capsules where two bones meet. To prevent the bones touching the end of each is covered in cartilage and the space between the two is filled with fluid, held in by a membrane. In a healthy dog the **cartilage** is pearly white, smooth, soft and flexible, and provides **shock absorption** during impacts.

Poor nutrition, ill health, disease, injury and especially old age can all **cause the cartilage to become brittle, rough and pitted** resulting in **pain and inflammation** each time the two come into contact.

Cartilage is a bit like a wall, with "bricks" called **collagen** and **proteoglycan** "cemented" together by **sulphur-containing substances**. As we move through life this wall is constantly **broken down and rebuilt** by the body. The problem is that as we **age the rebuilding process becomes much less efficient**.

Glucosamine and chondroitin can help this rebuilding process by stimulating the production of the "bricks", and **inhibit breakdown** of the "cement".

Good nutrition can help, with foods such as **Fish being rich in both Glucosamine and Chondroitin**. Also, **fish contains a high level of sulphur**, which further promotes the "cement" production.

Inflammation is another very important aspect of joint pain in older animals. As well as friction caused through **cartilage damage, infection** can also increase **inflammation and pressure** around the joint.

Fish oils are particularly effective at reducing this inflammation and,

although they are certainly not a cure, they have also been found to be extremely effective at reducing the **painful symptoms** of conditions such as rheumatoid arthritis.

Dehydration can also reduce mobility, as it can cause crystal formation in the joint fluid, which also irritates the sensitive membranes that encapsulate the fluids. To minimise the occurrence of joint discomfort further it is also **important for your dog to have a diet containing balanced amino acids. Fish is particularly suitable for this.** An imbalance in amino acids means that the dog has to modify and then **excrete any excess**. This process generates the compound ammonia which circulates in the blood until removed by the kidney, after conversion to urea. If the concentration of blood ammonia is particularly high, or the efficiency of its excretion is reduced due to kidney problems, e.g. in **older age**, this ammonia can crystallise in and around joints, **causing pressure and inflammation**.

In summary, to ensure our dogs are **active and happy** well into **later life**, it is important to provide a **diet rich in glucosamine and chondroitin**, with a good level of **omega-3 oils from fish**, and **digestible protein with balanced amino acids**.

FEED FISH ... AND SEE THE DIFFERENCE!