

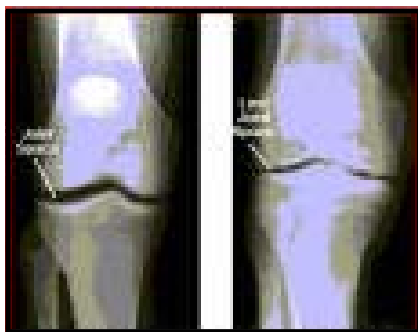
## GLUCOSAMINE

### WHAT IS GLUCOSAMINE?

One of the most effective supplements for osteoarthritis is a compound called **glucosamine**. Glucosamine is an amino sugar produced from the shells of chitin (shellfish) and is a key component of cartilage. Glucosamine works to stimulate joint function and repair. It has been proven effective in numerous scientific trials for easing osteoarthritis pain, aiding in the rehabilitation of cartilage, renewing synovial fluid, and repairing joints that have been damaged from osteoarthritis.

Each person produces a certain amount of glucosamine within their bodies. When people grow older, their bodies lose the capacity to make enough glucosamine. Having ample glucosamine in your body is essential to producing the nutrients needed to stimulate the production of synovial fluid, the fluid

which lubricates your cartilage and keeps your joints healthy. Without enough



Healthy knee

Arthritic knee

glucosamine, the cartilage in their weight-bearing joints, such as the hips, knees, and hands deteriorates. The cartilage then hardens and forms bone spurs, deformed joints, and limited joint movement. This is how the debilitating disease of osteoarthritis develops.

### IS IT SAFE?

Evidence from a well respected trial that was publicized in "The Lancet" - a medical peer review journal - showed that glucosamine provided prolonged analgesic (pain relief) benefits with side effects similar to taking a placebo (a sugar pill). In addition to showing measurable improvement of joint health on x-ray. Importantly while many brands of glucosamine on the market have numerous other additives, there is no proven benefit of these other additives, nor have they shown to be completely safe as they are usually not the focus of the research. Chondroitin is a typical additive, essentially because it is a precursor to cartilage. You can pay significantly more to have shark-based glucosamine, except that this may not be all that good for the shark population.

### HOW MUCH PER DAY?

Most studies recommend 1000mg of glucosamine sulphate—potassium chloride complex. Since this is really a nutritional supplement, is natural and has no side effects, and is replacing a lack of glucosamine, it really needs to be taken continuously.

### HOW QUICKLY WILL IT WORK?

Glucosamine is not strictly a pain killer, but because of how it works, many people experience decreased pain in as little as 8 weeks. Unfortunately it's not a guaranteed result for everyone but the general success rate is quite high. An alternative is to take prolonged courses of anti-inflammatories that often have nasty side effects, become ineffective over time, and do not nourish the joints.

Taking glucosamine along with a high quality fish oil seems beneficial as the omega oils help with cholesterol, and also have an anti-inflammatory effect. We sell an excellent quality fish oil in the clinic.

### HOW LONG TO TAKE IT FOR?

Evidence suggests that you'll gain the most benefit from taking glucosamine over an extended period of time (3 years plus). This is in part due to the relatively slow regeneration process of cartilage.

### ANY SIDE-EFFECTS?

Some people experience slight, temporary gastrointestinal upsets. Otherwise it appears remarkably safe.

### IS IT FOR EVERYONE?

Glucosamine should not be taken by those with a known allergy to crustaceans, or a previous reaction to glucosamine. It has not been fully tested in children, pregnant or lactating women so should not be taken by these groups.