Painful faulty joints are a frequent problem.

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Joint problems are adversely affected by friction from wear, and more so the jolts from walking, running and jumping. The are also caused by lifting and carrying heavy things (use a barrow or trolley), deficiencies of minerals, boron, selenium with vitamin E (all help lubricate and strengthen muscles), magnesium, including your body weight all day every day, and by age. I've tried "Bone and Joint" supplements in New Zealand without success. Read on to see how my severely crook back since 1958, got



fixed in 2013, by removing heavy metals which get into joints and ruin them, and by stretching many times a day to allow the lubricant to get back into the joints. Many of the Chinese and Japanese stretching exercises let lubricants back into joints. This drawing shows the large amount of smooth bearing surfaces.

Read Leg Lifting that takes the weight off these and back joints, as does sleeping on one's sides, with knees and the back joints open.

A heavy body and lifting heavy items cause bigger loads, like farmers and timber yard workers. The first person I knew who had to have both knees replaced in 1985 worked in a timber (lumber) yard for decades lifting and moving timber manually. This is more mechanised now. Where possible, we should use wheels or carry lighter loads. When standing (like supermarket checkout tellers) or sitting,

most of the day, the lubricant gets squeezed out and doesn't get in again until lying down on your sides and/or stretching.

The more weight that heavy arthritic people lose, the greater the improvement in their knee and hip joints. A trial showed that those who lost at least 10% of their body weight had significantly less pain, and reduced inflammation.

Take a Pure capsulations Boron capsule with each meal. It is a joint necessity. Some brands contain Hg and other heavy metals, so Muscle Test and avoid them.

Google for 'Human boron replacements number by country'.

## **Knuckle Cracking**

Your joints, including those in your knuckles, are surrounded by a membrane called the synovial membrane, which forms a capsule around the ends of your bones. Inside this membrane is synovial fluid, which acts as a lubricant and shock absorber so your bones don't grind together when you move.

When you "crack" your knuckles, or any other joint, it expands the space between your bones, creating negative pressure that draws synovial fluid into the new gap.

This influx of synovial fluid is what causes the popping sound and feeling when you crack a knuckle. If you continually crack your knuckles, the synovial membrane and the surrounding ligaments will loosen, making it easier and easier for your joints to crack.

The biggest concern most people have about cracking their knuckles is that it could lead to arthritis, specifically osteoarthritis. If you have osteoarthritis, the cartilage within your joints is progressively being damaged, and the synovial fluid is typically reduced as well.

The pain and joint stiffness that you feel is a result of your bones starting to come into contact with each other as cartilage and synovial fluid diminishes. To date, research has not shown a correlation between knuckle cracking and osteoarthritis in hands.

A reasonable amount of correct exercise helps to maintain joint health. However excessive exercise increases your rate of degeneration. Sportsmen, keep-fit enthusiasts, and dancers have a very high incidence of joint degeneration, usually starting at quite a young age.

Nutritional deficiencies can cause early degeneration in all body systems. Serious disorders such as anorexia, bulimia, Crohn's disease, Irritable Bowel Syndrome etc., can have disastrous effects on the joints.

Muscle test all foods and supplements. Read Muscle Test.

## What can be done to prevent and treat osteoarthritis?

a. Regular exercise moderately keep joints flexible and muscles strong, but avoid doing 'high-impact'

exercises for long periods. Alternate them with 'low-impact' activities such as gardening, swimming and non-weight bearing gym work. Ballroom dancing is an ideal exercise for maintaining bone density, especially as it can be continued for long periods.

- b. Avoid injuries. An intelligent approach to exercise will minimise injuries. Should problems occur, be sure to allow enough time for a full recovery, and seek professional advice if symptoms persist.
- c. Eat sensibly. Eating a wide range of natural foods (not processed ones) regularly helps to maintain good general nutrition. Some foods have particular properties which make them especially valuable, e.g. oily fish (mackerel, salmon, pilchards, herring) flaxseed/linseed oil. All oily supplements should be kept in a fridge. Eat fruit especially blueberries, bilberries, cranberries and cooked tomatoes for their lycopene.
  - d. Maintain a sensible weight.
- e. Check for Food Allergies. Severe joint problems can be due to food sensitivities. Consult a health professional for screening.
- f. Take regular supplements. Individuals who are at high risk of developing osteoarthritis or those who are already sufferers can often benefit from taking regular nutritional supplements.

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## Which supplements are useful?

There are many substances that can help, but do not try everything at once - you might have difficulty deciding which was responsible for the improvement. Take any supplement regularly for months before being sure of its effectiveness.

- a. Glucosamine and Chondroitin These are naturally occurring substances which help to maintain and repair joint cartilage. Particularly effective when combined with shark cartilage. Glucosamine and Chondroitin are two of the most thoroughly researched supplements, and are widely available however, quality varies enormously between brands.
  - b. Pantothenic acid (Vitamin B5) is used by the body to produce its own anti-inflammatory hormones.
- c. D-L Phenylalanine (DLPA) DLPA acts as a natural pain suppressant, which has none of the disadvantages of commonly used anti-inflammatory/pain killers.
  - d. Manganese is believed to reduce degenerative joint damage.
- e. Antioxidants help protect joints from damage caused by environmental and internal pollution, excessive exercise and bad diet. They include Vitamins A, C and E, Selenium, certain plant extracts and MSM (methyl sulphonyl methane).
  - f. Fish and Flax Seed Oils are thought to improve joint lubrication and reduce inflammation.
- g. Green-lipped Mussel Extract ('Seatone', 'Musseltone') produced in New Zealand, is a useful antiinflammatory, with few reported side effects. It is often helpful for individuals with advanced degenerative changes.