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Heart to Heart Talk

With Philip S. Chua, M.D.

Breakthrough in Arthritis!

What is arthritis?

Arthritis or osteoarthritis is a degenerative disease of the joints and is the leading cause of disability in the world today. It is twice more common among women. Forty million Americans (about 15% of the population of the United States) have some form of arthritis in 1995 and by year 2020, this is predicted to go up to 59 million or 18% of the population. In general, 50% of those above 50 years olds have some form of osteoarthritis.

What is the cause of osteoarthritis?

Osteoarthritis ("osteo" means bone, "arthro" means joint, and "itis" means inflammation) is caused by daily wear and tear of aging, or of repeated trauma (as in sports) and is characterized by a general breakdown of the cartilage (collagen cushion) in the joints, leading to pain and stiffness. One theory implicates the immune system. As a person gets older, he/she loses some of the joints' proteoglycans (which makes the cartilage more resilient to pressure and weight-bearing). The cartilage deteriorates and thins out, reducing the shock-absorbing protection for the joints so the joints get eroded. The inflammatory component is minor, compared to that in rheumatoid arthritis. Majority of arthritis we hear about is osteoarthritis. Other causes include metabolic diseases, infection, immune system malfunction, arterial blood supply deficit, etc. Most mammals suffer from arthritis in old age.

What is cartilage?

Cartilage is a connective tissue that holds joints together like a biological glue. It is made of about 70-80% water, 10-15% collagen fibers, 5-10% proteoglycans (glycosaminoglycans), and other proteins. The glycosaminoglycans are made up of chains of chondroitin-sulfate disaccharides. The cartilage acts a cushion, a shock-absorber, between two bones, thus preventing them from grinding against each other and wearing down faster. The proteoglycans gives it the ability to withstand heavy loads, compression under heavy weight and re-expansion to its original dimension when the load is removed. Just like shock-absorbers in vehicles!

Is oseteoarthritis the same as osteoporosis?

No. Osteoarthritis involves the joints (where two bones meet, with a cartilage in between), like the elbows, knees and fingers. Osteoporosis is thinning of the bones as a result of a loss of calcium and other minerals that make up the bones. It is not infrequent to see patients, especially women, suffering from both ailments.

Which joints are usually afflicted?

The knees, hips and spine are the most commonly involved joints. Next are the finger joints, the joint at the base of the thumb and the joint at the base of the big toe. Other joints, like the neck joint, may also be affected.

Does wearing high-heeled shoes cause osteoarthritis?

Yes, it has been shown that wearing high-heeled shoes can cause osteroarthritis. High heeled shoes alter the forces at the knees, thigh bones and hips and predispose the joints to osteoarthritis. Any trauma to any joints can cause osteoarthritis.

What is this "revolutionary" arthritis pill?

The latest drug combination (in one pill) for osteoarthritis is Glucosamine Sulfate with Chondroitin Sulfate (GS-CS). This drug duo has been getting a lot of attention in the press and in the medical literature for its effectiveness. Many Rheumatologists today prescribe it. Glucosamine is a natural substance normally found in our body, which stimulates the biosynthesis of some proteoglycans and restores damaged chondrocytes (cartilage cells). Chondroitin stimulates the production of collagen and proteoglycans and also inhibits the enzyme that degrades proteoglycans. Aging and joint trauma cause the normal levels of these two substances in our body to decrease, leading to the onset of osteoarthritis.

How effective is the GS-CS pill?

One third of arthritis patients taking the GS-CS pill obtain moderate to significant relief from the pains and stiffness of arthritis, another 33% get slight improvement, and a third without relief. So, about 66% are helped by this drug combination, which is certainly more effective than aspirin preparations, NSAIDs (non-steroidal anti-inlamatory drugs, like ibuprofen and naproxen). Some patients require both GS-CS and NSAIDs to obtain relief.

What is the concern about NSAIDs?

Like aspirin, even the enteric coated or buffered aspirin, NSAIDs cause a lot of gastric irritation. Some patients have developed stomach ulcers, with and without bleeding, from the use of aspirin or NSAIDs. Glucosamine and Chondroitin. Minor and temporary side-effects of gastric upset and nausea, and rare allergic reaction have been reported.

Can diabetics or pregnant women take GS-CS?

The usual recommended dose of GS-CS for osteoarthritis is 500 mg three times a day, and the glucose molecule in GS-CS pills is quite low, so that it may be taken by diabetics, so long as it is under medical supervision. No studies on the effects of GS-CS among pregnant women have been published, so we do not recommend this treatment for those in the family way.

Do vitamins and minerals help in osteoarthritis?

Yes, a study in Boston University Medical Center showed that vitamins C, B and D are of benefit in the treatment of osteoarthritis, and that antioxidants (as the flavonoids and carotenoids in fruits, vegetables, grains, legumes, etc) inhibit the progression of the disease. The roles of minerals in osteoarthritis are not clear, but it is safe to say that taking multivitamins with minerals daily is a healthy practice.

How can we prevent osteoarthritis?

We cannot totally prevent osteoarthritis until we can stop the aging process, but we can take some measures to minimize or slow down the process of wear and tear of our joints. Among these are: (1) Eat a healthy diet, with a lot of fibers, fruits, and vegetables; (2) Take multivitamins with minerals daily (3) Do not smoke; (4) Do daily physical exercises; (5) Maintain a normal body weight; (6) Maintain a good posture at all times; (7) Avoid repetitive activities that will overburden the joints in the body; and, (8) Consult with your physician for proper treatment and regular check-up. Prevention is the key to health.

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Our readers are invited to send in their medical questions for possible inclusion in future issues of this column. Mail your questions to the author at Heart to Heart Talk, c/o Cebu Cardiovascular Center, Cebu Doctors' Hospital, Osmena Boulevard, Cebu City, Philippines, or e-mail them to heart@chua.net

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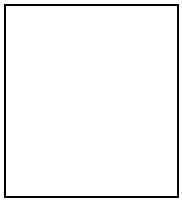

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