

Exciting Stuff when it comes to Joint Health:

Contrary to popular belief, cartilage in human joints can repair itself through a process similar to that used by creatures such as salamanders and zebrafish to regenerate limbs, researchers have found.

[See Study](#)



Know Your Joints
Muscle and Joint Care
Suggestions

A new study suggests they do have some capacity to restore cartilage in their joints. The findings run counter to a widely held belief: Because the cartilage cushioning your joints lacks its own blood supply, your body can't repair damage from an injury or the wear-and-tear of aging. And that, in part, is why so many people eventually develop osteoarthritis, where broken-down cartilage causes pain and stiffness in the joints. But that lack of blood supply does not mean there's no regenerative capacity in the cartilage, according to researchers in a study. They found evidence that human cartilage can, to some degree, renew itself, using a molecular process similar to the one that allows a salamander to grow a new limb. The researchers are calling it the "inner salamander capacity." The lead author explained, that capability exists in a "gradient." It's greatest in the ankle, less apparent in the knee, and lowest in the hip. She goes on to suggest that makes sense if this repair capability is an artifact of evolution, where animals that regenerate tissue have the greatest capacity for it in the distal portions of the body -- the parts "most likely to get chewed off. Could this be a partial explanation for why osteoarthritis is common in the knees and hips, but not the ankles? The investigators found, ankle cartilage showed the greatest number of young proteins. Knee cartilage looked more middle-aged, and hip cartilage had relatively few young proteins and plenty of old. The study found, molecules called microRNAs seem to regulate the process. They were more abundant in ankle cartilage than tissue from knees and hips, and in the top layers of cartilage, versus the deeper layers. According to [WebMed](#) as it happens, microRNAs also help salamanders regrow lost limbs. In the future the researchers suggest that injectable microRNA drugs be used to boost cartilage self-repair?