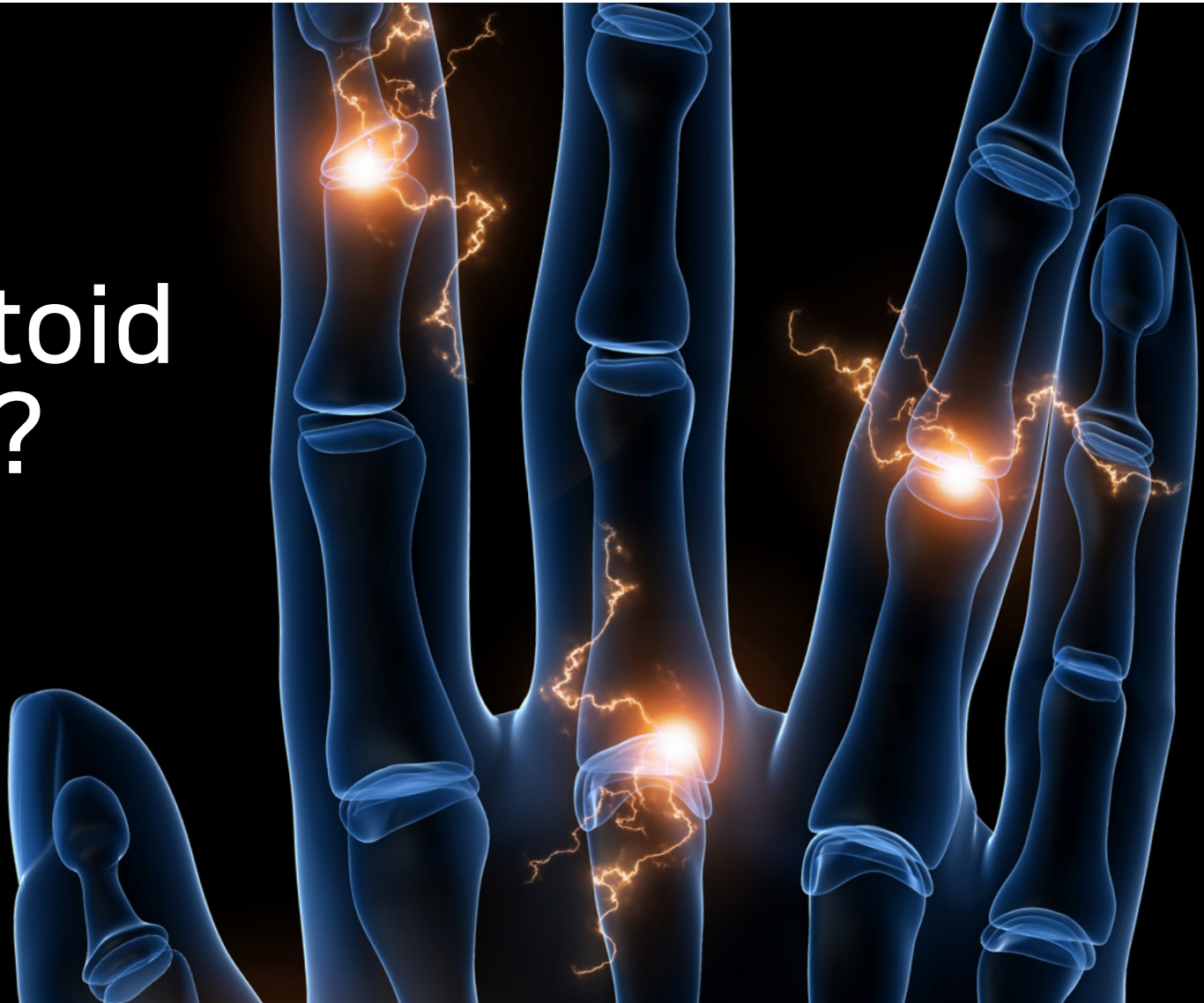
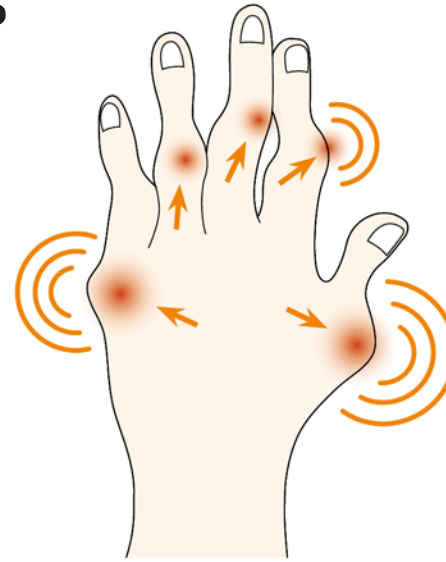


What is Rheumatoid Arthritis?



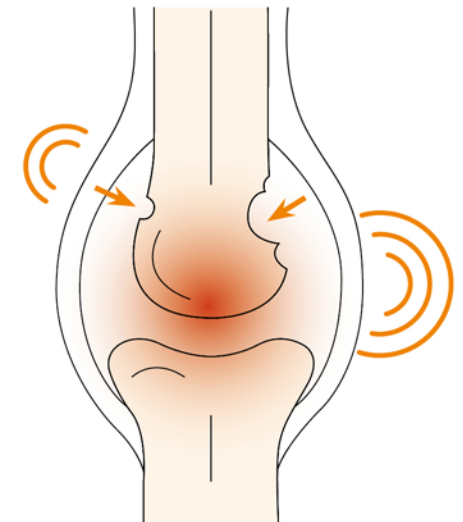
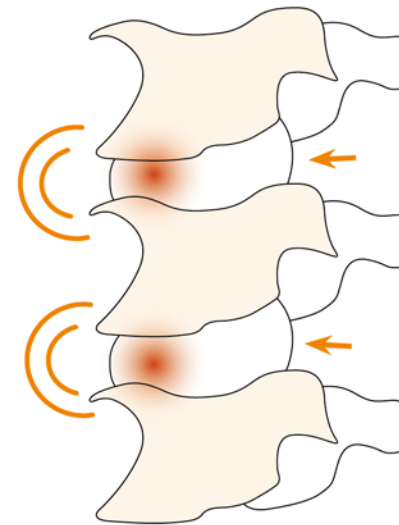
About Rheumatoid Arthritis



“Rheumatoid arthritis” is a type of autoimmune disorder, that abnormal autoimmune functions of a patients cause chronic and systemic inflammation. The diseases typically results in inflammation in the joint synovium and symmetric swelling in multiple and hand and foot joints. Patients experience severe pain in affected areas, and the pain grows intense as the disease progresses.

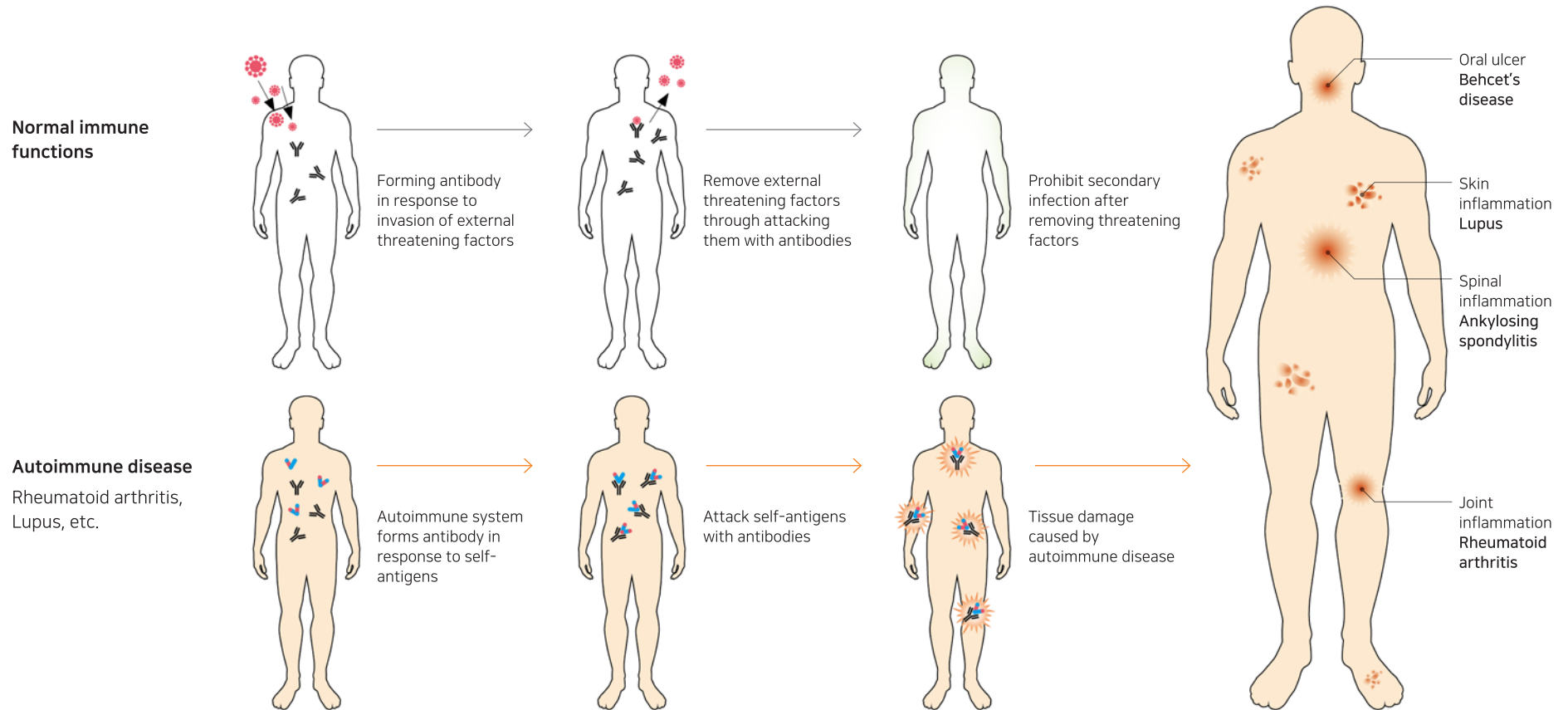
The affected areas including hand and foot joints can be deformed to the extent that they can be seen with unaided eye, and the deformity may interfere with daily activities. Rheumatoid Arthritis accompanies various complications such as anemia, Sjögren syndrome, subcutaneous nodule, vasculitis, and more.

The term “Rheumatoid Arthritis” is derived from Ancient Greek terms ‘rheuma-,’ which means “flow of water,” and “-toid,” which means “being similar.” The etymology shows Greek people’s belief the swelling and pain was caused by “bad water” flowing into joints.



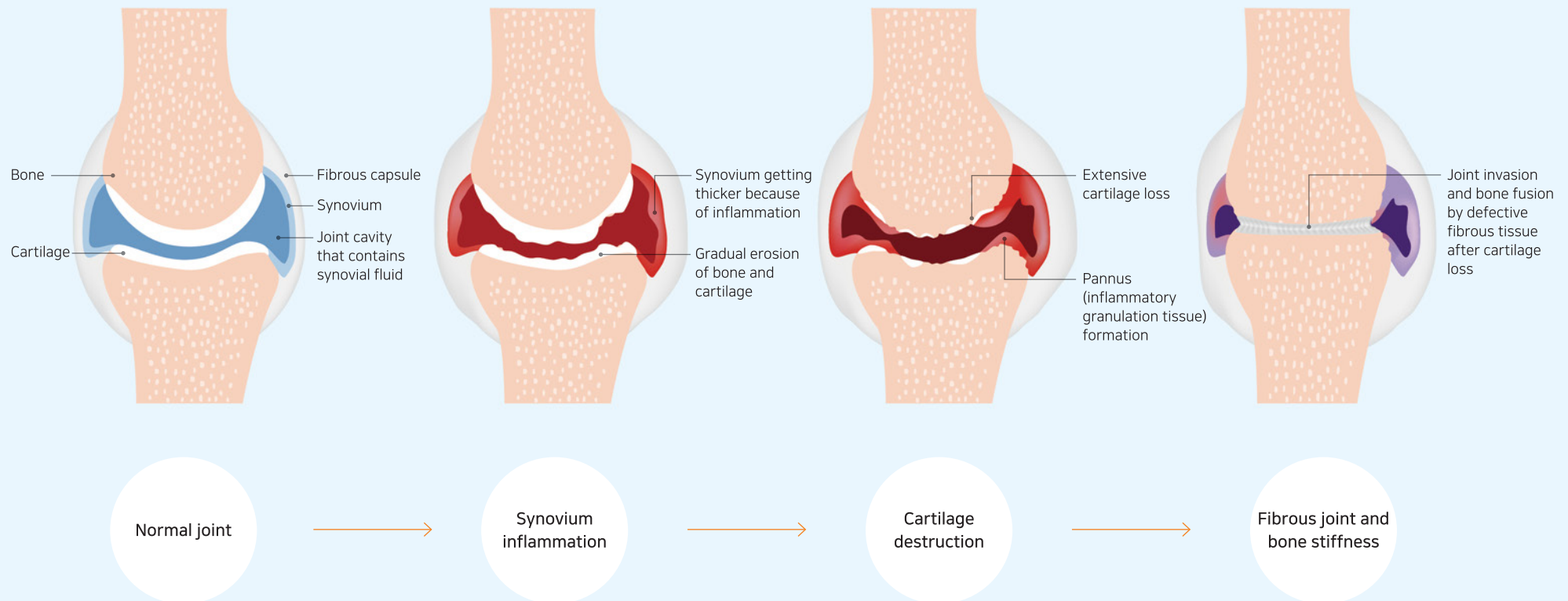
What is an autoimmune disease?

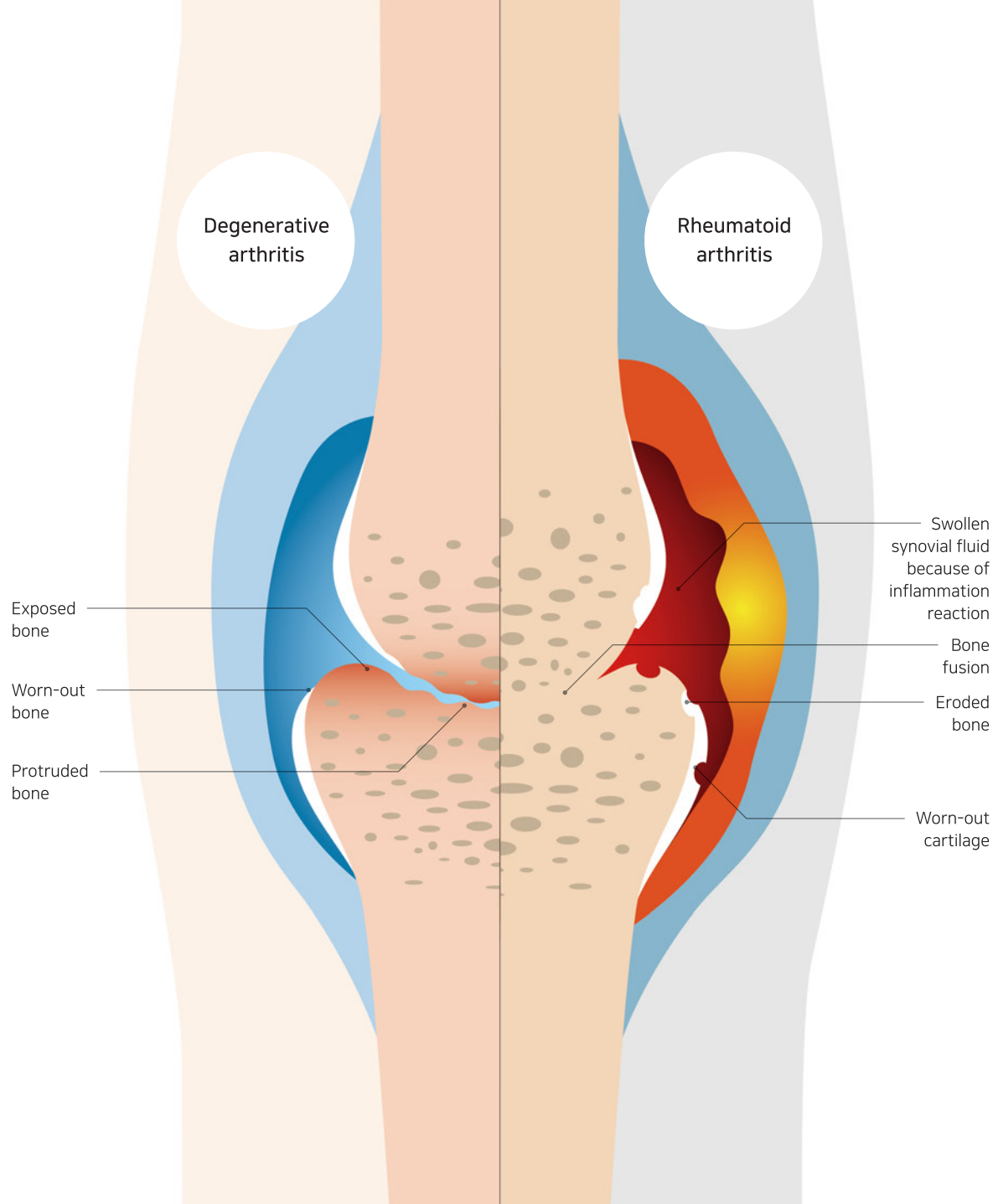
Rheumatoid arthritis is a type of autoimmune disease. The human immune system's original role is to respond to antigens (external pathogens and viruses) invade body. The system, however, can be disrupted due to genetics, environment, hormones and viral infections. Then immune cells in the body may recognize normal cells or tissues as antigens, thereby causing an autoimmune disorder. Typical autoimmune diseases are rheumatoid arthritis, lupus, inflammatory bowel disease (IBD) and psoriasis. Recently, various biological therapeutic agents including TNF- α inhibitors and interleukin inhibitors have been developed to relieve the symptoms of such diseases.



Symptoms of Rheumatoid Arthritis

Typical symptoms of rheumatoid arthritis include swelling and burning sense in various joints in body that comes with pain and stiffness. In particular, the "morning stiffness" symptom, which means that joints become stiff for one hour after waking up in the morning, occurs, but because the symptom usually goes away upon movement, rheumatoid arthritis goes undetected. However, once the disease progresses, cartilage gets destroyed, and adjoining bones proliferate abnormally to replace the damaged cartilage, thereby causing body deformity.





Degenerative arthritis

Rheumatoid arthritis

Exposed bone

Worn-out bone

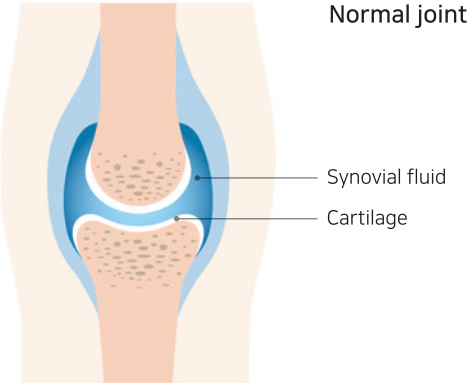
Protruded bone

Swollen synovial fluid because of inflammation reaction

Bone fusion

Eroded bone

Worn-out cartilage



Normal joint

Synovial fluid

Cartilage

Rheumatoid arthritis vs. degenerative arthritis

Rheumatoid arthritis is often confused with degenerative arthritis, but these diseases have considerable differences in symptoms, pathogenesis, affected areas and other aspects.

Rheumatoid arthritis is a chronic inflammatory disease caused by the dysfunction of immune system that usually affects patients in their 30s or 40s. Also, the occurrence ratio for women is approximately three times greater than for men. Family history also plays a large role in developing rheumatoid arthritis. The disease result in symmetrical lesions of joints of the body such as wrists, joints between fingers, small joints of feet.

Degenerative arthritis, on the contrary, is caused by wearing out or ruptures and consequential inflammation in cartilage that covers bones due to aging, accidents, and obesity. It often occurs in patients who are older than 45, and particularly more in patients older than 75. Degenerative arthritis usually attacks knees, spine, or hip joints that have to support heavy body weight, and unlike rheumatoid arthritis, it asymmetrically occurs in either one side of joints.

REFERENCE

1. 삼성서울병원 류마티스내과 이재준 교수

http://www.samsunghospital.com/home/healthInfo/content/contentView.do?CONT_SRC_ID=33863&CONT_SRC=HOMEPAGE&CONT_ID=6657&CONT_CLS_CD=001027

2. 전남대학교병원 류마티스내과 이신석 교수

https://www.cnuh.com/health/disease.cs;WEB_JSESSIONID=1BFB761C16F6FB81D7C88BA9E4B0AD9E?act=view&infol=313&searchKeyword=&searchCondition=&pageIndex=27

3. 경희대병원 류마티스내과 홍승재 교수 (헬스조선)

http://health.chosun.com/site/data/html_dir/2018/12/17/2018121700542.html



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