

INTERLEUKIN 17-A (IL-17A) IN INFLAMMATORY JOINT DISEASE

A messenger protein (or cytokine) that plays a key role in autoimmune diseases¹

INCREASED LEVELS OF IL-17A AFFECT THE JOINTS CAUSING PAIN AND DISABILITY²

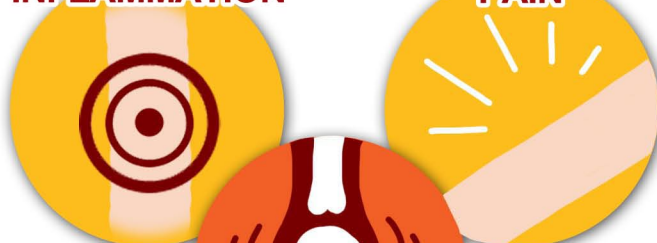
IL-17A helps to protect us from infection³ but in inflammatory joint diseases IL-17A plays a key role in disease development¹

IL-17A triggers an inflammatory response during infection that results in bone erosion and bone reformation⁴⁻⁶

In inflammatory joint disease infection-fighting cells continue to release IL-17A, leading to excessive inflammation, which causes damage⁴⁻⁶

INFLAMMATION

PAIN



SWELLING



BONE EROSION



BONE FORMATION

PSORIATIC ARTHRITIS AND ANKYLOSING SPONDYLITIS ARE TWO OF THE MOST COMMON INFLAMMATORY JOINT DISEASES AND AFFECT MANY PARTS OF THE BODY⁷⁻¹⁰

PSORIATIC ARTHRITIS

ANKYLOSING SPONDYLITIS



Skin & nails

Joints & tendons

Toes & fingers



Spine

Pelvis

Joints & tendons

IL-17A: A NEW POTENTIAL TARGET

New, innovative treatments have been developed that specifically target IL-17A to block the cytokine's inflammatory effect and improve the lives of people living with psoriatic arthritis and ankylosing spondylitis¹⁰

1. Kopf M et al. Averting inflammation by targeting the cytokine environment. *Nat Rev Drug Discov.* 2010;9(9):703-18.
2. Arthritis Foundation. FDA Approves Biologic Secukinumab for Ankylosing Spondylitis and Psoriatic Arthritis. Available at: <http://blog.arthritis.org/news/new-biologic-medication-fdaapproved-secukinumab/>. Accessed March 2016.
3. Onishi RM, Gaffen SL. Interleukin-17 and its target genes: mechanisms of interleukin-17 function in disease. *Immunology.* 2010;129:311-21.
4. Noordenbos T et al. Interleukin-17-positive mast cells contribute to synovial inflammation in spondyloarthritis. *Arthritis Rheum* 2012; 64(1):99-109.
5. Taylan A et al. Evaluation of the T helper 17 axis in ankylosing spondylitis. *Rheumatol Int* 2012; 32(8):2511-2515.
6. Mei Y et al. Increased serum IL-17 and IL-23 in the patient with ankylosing spondylitis. *Clin Rheumatol* 2011; 30(2):269-273.
7. Liu J-T et al. Psoriatic arthritis: Epidemiology, diagnosis, and treatment. *World J Orthop* 2014; 5(4):537-543.
8. Medscape. Psoriatic Arthritis: Epidemiology. Available at: <http://emedicine.medscape.com/article/331037-overview#aw2aab6b7>. Accessed March 2016.
9. WebMD. Spondyloarthropathies - Topic Overview. Available at: <http://www.webmd.com/arthritis/psoriatic-arthritis/psoriatic-arthritis-topic-overview>. Accessed March 2016.
10. Reveille JD. American College of Rheumatology. Spondyloarthritis. Available at: <http://www.rheumatology.org/Am-A/Patient-Caregiver/Diseases-Conditions/Spondyloarthritis>. Accessed March 2016.