

***Book Chapter in Arthritis and Allied Conditions. A Textbook of Rheumatology (15th Edition), Koopman, WJ, Editor, Lippincott, Williams & Wilkins, Baltimore, USA, Chapter 109, pp 2199-2226, 2005.***

## **ETIOPATHOGENESIS OF OSTEOARTHRITIS**

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Osteoarthritis (OA) results from interaction among a number of complex biologic processes, both degradative and reparative. There is a growing trend to view the joint as an entire organ and primary OA as a disease of this organ. OA can be classified as primary or secondary. The secondary form of OA, for the most part, involves, a structurally or biomechanically faulty joint, with superimposed risk factors that affect the intensity and distribution of loading forces across the joint surfaces. However, for most patients who suffer from this disease, inflammatory components are present to a variable degree. This chapter focuses on research advances in the understanding of the major etiopathogenic factors contributing to OA, with emphasis on the cellular biology, molecular mechanisms, and biochemistry of joint tissues as well as the role played by relevant inflammatory and growth factors. A section on new diagnostic tools and therapeutic advances is also included.

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Osteoarthritis (also known as OA) is a common joint disease that most often affects middle-age to elderly people. It is commonly referred to as "wear and tear" of the joints, but we now know that OA is a disease of the entire joint, involving the cartilage, joint lining, ligaments, and bone. OA is a top cause of disability in older people. The goal of osteoarthritis treatment is to reduce pain and improve function. There is no cure for the disease, but some treatments attempt to slow disease progression. What is osteoarthritis?

Etiopathogenesis of osteoarthritis. *Med Clin North Am.* 2009 Jan;93(1):1-24, xv. doi: 10.1016/j.mcna.2008.08.009. Because of the implications for prevention and treatment, how a clinician views osteoarthritis (OA) matters. We view OA as an attempt to contain a mechanical problem in the joint and as failed repair of damage caused by excessive mechanical stress on the joint. OA is organ failure of the synovial joint. Accordingly, knowledge about the pathogenesis of osteoarthritis is important. This article compares the mechanism of secondary bone healing with that of osteoarthritis, and can show clear parallels based on numerous study findings. This leads to the hypothesis that osteoarthritis corresponds to a mechanism of bone healing in the wrong place. Keywords: osteoarthritis, pathogenesis, bone healing. Volume 3 Issue 1 - 2015. The etiopathogenesis of osteoarthritis has been divided into 3 stages. Stage 1 In stage 1, proteolytic breakdown of the cartilage matrix occurs. Osteoarthritis (OA) results from an imbalance between breakdown and repair of the tissues in the synovial joints. Risk factors include trauma, overuse, obesity, and genetic predisposition. The etiopathogenesis of osteoarthritis has been divided into 3 stages. In stage 1, proteolytic breakdown of the cartilage matrix occurs.