



Product Monograph

Articular Cartilage Degeneration

Musculoskeletal joint conditions are among the most prevalent disease processes in the United States. These disease processes are second only to heart disease in causing significant disability that affects work status. Osteoarthritis, otherwise known as degenerative joint disease, is the most prevalent form of arthritis. This disease process represents a slowly evolving condition of cartilage and bone in arthroal joints. The Centers for Disease Control and Prevention predicted that by 2020 arthritis will gain more new patients than any other disease form in America. As in other disease processes in the body, multiple factors lead to the development of osteoarthritis.

Numerous causal factors can lead to this breakdown in joint homeostasis. A traumatic event is one of the most obvious initiating events. This can be in the form of a single occurrence or multiple microtraumatic events over a prolonged period. Other risk factors for the development of osteoarthritis exist, including systemic risk factors such as genetic deformities, dietary intake, estrogen use, and bone mineral density. Other issues that can affect the joints directly include muscle weakness, joint hyperlaxity, and obesity; all can predispose individuals to osteoarthritis.

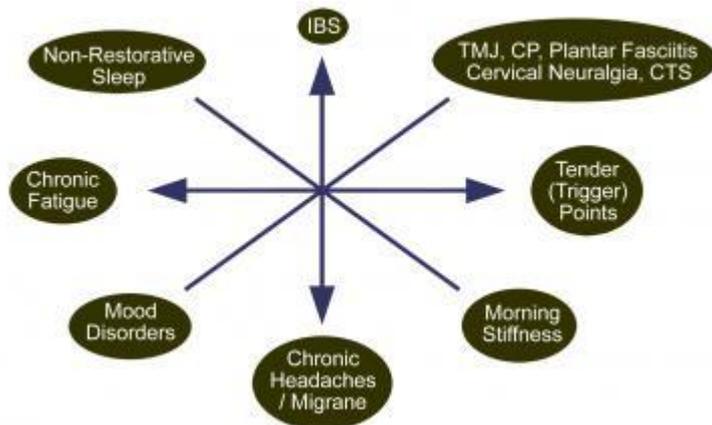
Nonarticular rheumatism:

Nonarticular rheumatic pain syndromes can be classified into five general categories, as follows:

1. Tendonitis and bursitis, such as the common lateral epicondylitis (tennis elbow) and trochanteric bursitis
2. Structural disorders, such as pain syndromes resulting from flatfoot and the hypermobility syndrome
3. Neurovascular entrapment, such as carpal tunnel syndrome and thoracic outlet syndrome
4. Regional myofascial pain syndromes, with trigger points similar to those of fibromyalgia but in a localized distribution, such as the temporomandibular joint syndrome
5. Generalized pain syndromes, such as fibromyalgia (FMS) and multiple bursitis-tendonitis syndrome

The more generalized and chronic the syndrome, the more difficult it is to treat.

The spectrum of nonarticular pain syndromes and their interactions with mood disorders and chronic fatigue is depicted in the image below. Comorbidity is common. [\[1,2\]](#)



Arthnex Forte Tablet contain specific ingredients which is effective in Articular Cartilage Degeneration and Nonarticular rheumatism

Tinospora cordifolia

Tinospora cordifolia mainly contain different type of aporphine alkaloids and clerodane diterpenes Octacosanol isolated from *Tinospora cordifolia* downregulates VEGF gene expression by inhibiting matrix metalloproteinases and nuclear translocation of NF- κ B and its DNA binding activity

Ricinus communis

Commonly known as castor oil plant, it is indigenous to the southeastern Mediterranean Basin, Eastern Africa, and India. The seed from the plant is a rich source of triglycerides (mainly ricinolein) and ricin. Traditional Ayurvedic medicine considers castor oil the king of medicines for curing arthritic diseases. In a study carried out in guinea-pig eyelid, ricinolein was found to possess both pro-inflammatory and anti-inflammatory properties that were observed upon acute and repeated application of the compound, respectively

Cedrus deodara

The wood of *C. deodara* has been used since ancient days in Ayurvedic medical practice for the treatment of inflammations and rheumatoid arthritis

Zingiber officinale

Traditionally, ginger has been used in arthritis . Phytochemical studies showed that the plant is rich in a large number of substances, including gingerols and shogaols. These compounds display diverse biological activities such as antioxidant, anti-inflammatory properties. They also exhibit a spasmolytic



activity, which is mediated via blocking Ca^{2+} channels. A number of recent studies have renewed interest in ginger for the treatment of chronic inflammatory conditions

Sida cordifolia

It is reported to possess analgesic, anti-inflammatory This plant also used for treatment of Parkinson's disease and as an anti-rheumatic agent . The plant alkaloid cryptolepine from *S. cordifolia* has been reported to induces cell cycle arrest in a human osteosarcoma cell line

Commiphora mukul

Guggulsterone [4,17(20)-pregnadiene-3,16-dione] is a plant sterol derived from the gum resin (guggulu) of the tree Commiphora mukul. The resin of the C mukul tree has been used in Ayurvedic medicine for centuries to treat such ailments as bone fractures, arthritis, inflammation.

Gujral et al demonstrated the anti-arthritic and anti-inflammatory activity of gum guggul . Sharma et al showed its activity in experimental arthritis induced by mycobacterial adjuvant . The effectiveness of guggul for treating osteoarthritis of the knee has also been demonstrated. Meselhy et al showed that guggulsterone can suppress inducible nitric oxide synthetase (iNOS) expression induced by LPS in macrophages . Because NF- κ B has been implicated in obesity, inflammation, hyperlipidemia, atherosclerosis, and osteoarthritis and in the LPS-induced expression of iNOS, we speculated that guggulsterone mediates its effects, at least in part, through suppression of NF- κ B activation.