



Make Your Elder Years
To Your Golden Years

HyaRelief™



HyaRelief™

WHAT IS OSTEOARTHRITIS(OA) OF THE KNEE?

- Osteoarthritis (OA) is known as the most common chronic disease of the cartilage. As the cartilage breaks down due to wear-and-tear and/or mechanical stress, it causes swelling, pain and inflammation, leading to extracellular matrix (ECM) loss.¹
- Knee osteoarthritis (KOA) is a progressive joint disease that often involves intra- and per articular structures² and is considered pathology characterized by articular cartilage lesions, synovitis, subchondral sclerosis, and osteophytes³.
- Knee osteoarthritis (OA) is most often a slowly progressive joint disorder characterized by cartilage degeneration and inflammation⁴. Knee OA commonly results in knee pain and decreases patients' mobility (e.g. walking and stair climbing)⁵.
- The pain of osteoarthritis is usually related to activity. For osteoarthritis of the knee, activities such as climbing stairs, getting out of a chair, and walking long distances bring on pain. Morning stiffness usually lasts less than 30 minutes⁶. Patients often note that their knees "give way," a so-called instability symptom.



WHAT IS THE RISK FACTORS FOR OSTEOARTHRITIS?

- Age is one of the most risk factors⁷
- Biological age-related changes in the joint structures⁷
 - Female sex (knee OA)⁸
 - Obesity (knee OA)⁸
 - Previous knee injury (knee OA)⁸
 - Knee malalignment (knee OA)^{9,10}
 - knee extensor muscle weakness (knee OA)¹¹
- Cam deformity and mild dysplasia (especially in the middle aged (55–65 years), but not in the older population (older 65 years)) (hip OA)¹²
 - Severe dysplasia (hip OA)

WHAT ARE THE OA SYMPTOMS?

The joint pain of OA typically is described as being exacerbated by activity and relieved by rest. More advanced OA can cause pain at rest and during the night, leading to loss of sleep that further exacerbates pain. The cardinal symptoms that suggest a diagnosis of OA include Pain (typically described as activity related or mechanical; may occur with rest in advanced disease; often deep, aching, and not well localized; usually of insidious onset).

OSTEOARTHRITIS SYMPTOMS

LOSS OF FLEXIBILITY



PAIN



GRATING SENSATION



BONE SPURS



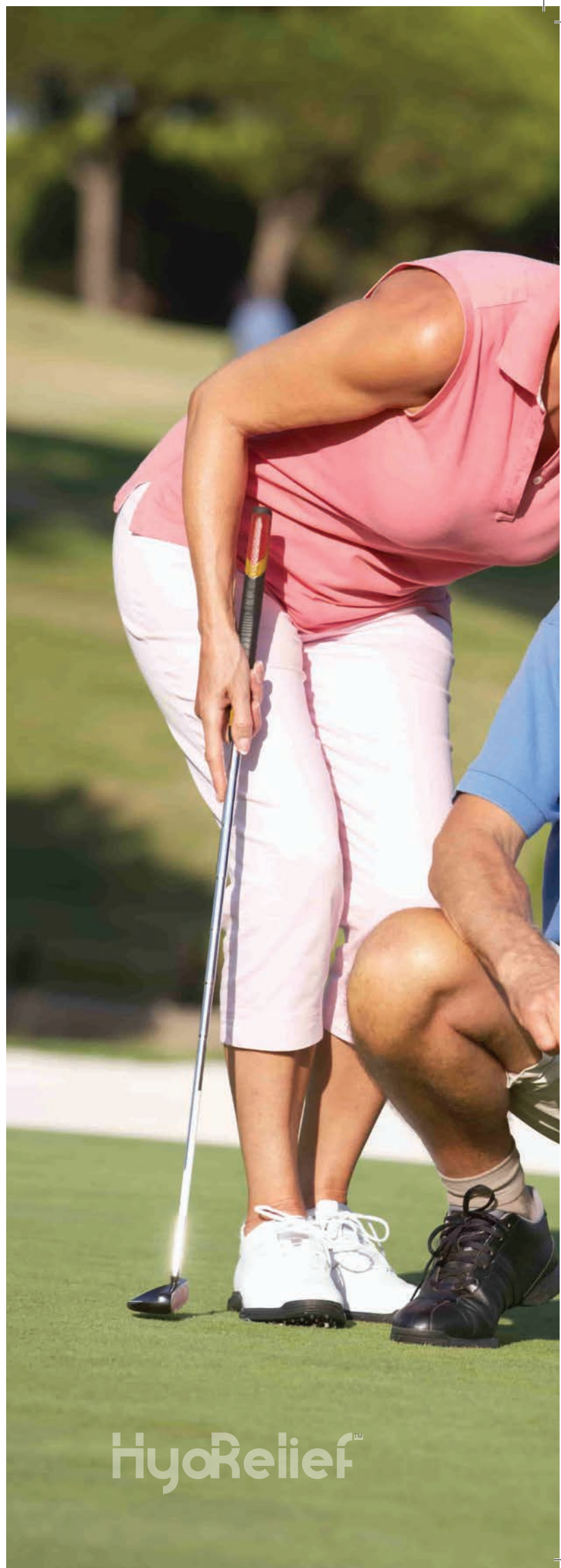
TENDERNESS



STIFFNESS



- Reduced function,
- Stiffness (of short duration, also termed "gelling," that is, short-lived stiffness after inactivity),
- Joint instability, buckling, or giving way,
- Patients also may complain of reduced movement, deformity, swelling in the absence of systemic features such as fever, crepitus, discomfort associated with increased age (OA is unusual before age 40 years), and, when pain persists, pain-related psychologic distress¹³.

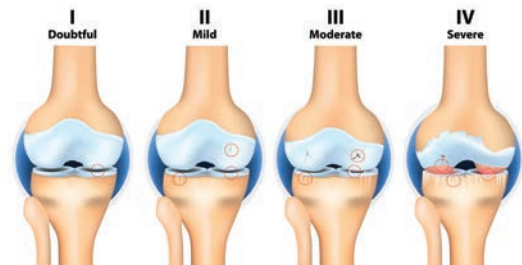


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OA STAGES

- Stage 0** (Pre-Osteoarthritis) –Asymptomatic
- Stage 1** (Early or Doubtful)- Mild joint pain; No serious symptoms yet
- Stage 2** (Mild or Minimal)- Pain with activity; Difficulty straightening and bending joints; Stiffness
- Stage 3** (Moderate)- Frequent pain with movement; Stiffness in the morning or after sitting; visible swelling of joints possible
- Stage 4** (Severe)- High pain with joint usage; Daily activities very difficult; Intense stiffness; Severe swelling and inflammation



WHAT IS HYARELIEF™ 2.0%?

Each injection delivers highly purified hyaluronic acid to the human joint disorders such as osteoarthritis.



- Hyarelief™ 2.0% is intended for the treatment of symptoms of human joint disorders such as osteoarthritis.
- Hyarelief™ 2.0% is indicated for viscoelastic replenishment or replacement of synovial fluid in human joints.
- Reduced joint pain and stiffness for up to 6 months.



WHAT IS HYALURONIC ACID?

- Hyaluronic acid is composed of D-glucuronic acid and N-acetyl glucosamine disaccharide units.
- Hyaluronic acid (HA, also known as hyaluronan; hyaluronate is its conjugate base) is an acidic, non-sulphated glycosaminoglycan that exists throughout the human body. Widely distributed, HA is found in the connective tissue of the dermis, synovial fluid, the vitreum, the dental pulp matrix, and other parts of the body¹⁴.
- Hyaluronic acid (HA) is a glycosaminoglycan that occurs naturally within the synovial fluid of the knee, providing lubrication of the joint and protecting the cartilage from mechanical degradation¹⁵.

CLINICAL EXPERIENCE WITH HYALURONIC ACID IN ORTHOPAEDICS

- Hyaluronic acid (HA) has been used mostly in the treatment of cartilage and osteoarthritis.
- It has been used in several joints (knee, ankle, shoulder, hip, first carpometacarpal, etc.).
- It has shown transient benefits in pain relief and improved range of motion (minimum 6 months).
- It has rare adverse effects (mainly self-limited pain and swelling (spontaneously solved within 48 h)).
- It has shown promising results in the treatment of tendinopathies including enteropathies.
- Intra-tendon injections might have deleterious effects¹⁶.



TREATMENT WITH HYARELIEF™ 2.0%

The product should be administered according to the frequency determined by the physician, according to the recommended frequency decision, such as 6-8-12 months. The number of injections is decision you and your doctor need to make.

WHEN SHOULD YOU NOT TAKE HYARELIEF™ 2.0%?

HyaRelief™ 2.0% should not be inject in patients with known sensitivity to any of the ingredients contained in product.

HyaRelief™ 2.0% should not be inject in patients with pre-existing infections of the skin in the region of the intended injection site.

HyaRelief™ 2.0% should not be administered known systemic bleeding disorders and known infection of the index joint and infected and inflamed joints.

HyaRelief™ 2.0% may contain trace amounts of gram positive bacterial proteins so should not be administered patients with a history of such allergy.

SAFETY INFORMATION

If the patients have any known allergies, should ask doctor to decide treatment with HyaRelief™ 2.0%.

Only medical professionals trained in accepted injection techniques for delivering agents to intra-articular synovial joint spaces should inject sodium hyaluronate for this application.

HyaRelief™ 2.0% is recommended for patients with Osteoarthritis and Joint Diseases.

The product should not use in pregnant or breast-feeding woman, and children.

MORE INFORMATION ABOUT TRADEMARK

Consult your physician.

Look at www.biosanas.com.tr



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Never Late To Relive Your Pain



Biosan Biyoteknoloji San. ve Dış Tic. A.Ş.

Bariş Mah. Koşuyolu Cd. Dış Kapı:26 İç Kapı:30-31 Gebze / KOCAELİ

Phone: +90 262 503 25 10

Web : www.biosanas.com.tr

e-mail: info@biosanas.com.tr

