



RHEUMATOID ARTHRITIS

CHRONIC INFLAMMATORY ARTHRITIS - IMPLICATIONS ON FOOT HEALTH

WHAT IS IT? Rheumatoid arthritis is an autoimmune disease in which the body's immune system mistakenly attacks the lining of the joints (synovial membrane).

PREVALENCE

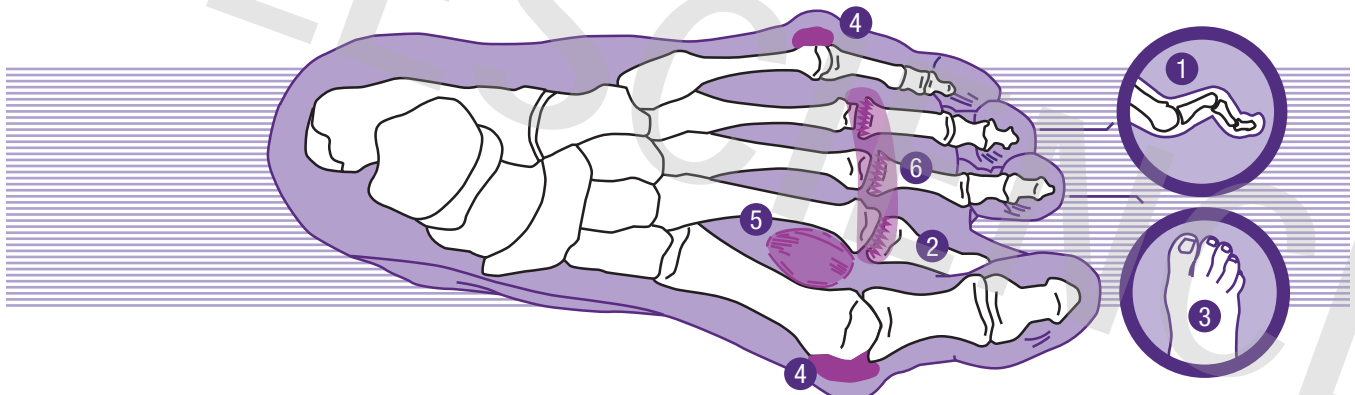
- Foot impairment (pain and disability) is experienced by 85%-100% of individuals with Rheumatoid Arthritis
- 0.3%-1% of general population suffer from Rheumatoid Arthritis
- Causes major economic and general health burden on society
- Can result in damage to synovial membrane of joints and/or bone erosion (loss of bone within joint)

RISK FACTORS

- Increased BMI and obesity
- Sex: females 3x more likely
- Risk increases with age
- Smoking

VISUAL CUES

- 1 Hammer Toe
- 2 Cross Over Toe
- 3 General and/or Localized Inflammation
- 4 Bunion/Bunionette
- 5 Rheumatoid Nodule
- 6 Flattened Metatarsal Head(s) and/or Joint Erosion



DIAGNOSIS/SYMPTOMS

- Presence of blood markers:
 - Rheumatoid Factor (RF)
 - *May be negative in early stages
 - Cyclic Citrullinated Peptide (CCP)
 - Erythrocyte Sedimentation Rate (ESR)
 - C-reactive protein (CRP)
- Joint swelling, redness and/or deformation
- Unexplained presence of associated pathology listed above
- Loss of function and joint stability
- Skin, lungs and eyes may also be impacted
- Swelling is commonly symmetrical in nature

TREATMENT (adjuncts to pharmaceutical care)

- Level 1 evidence supporting:**
- Custom Foot Orthoses: Significant impact on pain scores, no impact on disability
 - Occupational Therapy/Physical Therapy: Strong evidence supporting aerobic and resistance exercise as well as aquatic therapy
 - Diet
 - Weight Reduction:
 - Obesity and ↑ BMI shown to:
 - ↑ swelling in lower extremity joints
 - ↓ efficiency of treatment
 - Higher chance of remission
 - Cognitive Behavioural Therapy

OSTEOARTHRITIS

KNEE, MIDFOOT, 1ST MTP JOINT



WHAT IS IT? Osteoarthritis occurs when the cartilage or cushioning between joints breaks down resulting in bone on bone contact causing pain, stiffness and reduced range of motion. This form of arthritis affects more Canadians than all other forms of arthritis combined.

RISK FACTORS

- Sex: increased prevalence in women
- Obesity and ↑ BMI
- Hereditary
- Gait mechanics
- Mechanical injury/previous trauma to joint
- Foot Osteoarthritis:
 - 35%-60% in adults age 65+
 - Up to 35% in adults age 35-60
- 1st MTPJ osteoarthritis results in greatest difficulty with functional weight bearing

DIFFERENTIAL DIAGNOSIS



HOW TO DIAGNOSE

- X-ray*:
 - Joint space narrowing (pictured above)
 - Loss of articular cartilage
- Movement limitations
- Joint crepitus
- Difficulty with ADL's
- Joint thickening & redness
- Palpable osteophytes (1st MTP & midfoot)
- Reduced and/or painful range of motion

* Important to note that imaging results may not reflect patients symptom severity.

TREATMENT OPTIONS	Stable Rocker Sole Shoe	Physiotherapy	Rigid Toe Plate (1st MTPJ)	Custom Made Orthoses	Knee Brace	Injections	Surgery

MODALITIES	Activity modification Footwear with rocker sole Low impact activity Low impact physical therapy Weight Loss	Medication Bracing (knee) Custom foot orthoses: ↓ pain & drug use (knee) ↓ pain, ↑ activity (foot) ↓ pain, ↑ activity & footwear comfort (1st MTP)	Injection: cortisone or hyaluronic acid Surgery
*It is important that the treatment process begins at Stage 1.			
Kellgren-Lawrence Classification Scale	0-1	1-2	3-4

For more information, please visit www.solescience.ca/injury-locator