Ankle Arthritis Treatment in Worker Compensation
The New Gold Standard ~ Total Ankle Replacement

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What Causes Ankle Arthritis in Work Comp population?

- Ankle Sprain
- Ankle Fracture
- Ankle Instability due to work injury
- Prior Ankle Surgery
- Osteoarthritis
- Rheumatoid Arthritis
Why Ankle Replacement in Worker Compensation

• Earlier return to function

• Lesser disability

• Retain range of motion of ankle joint
Insurance Coverage

• 100% of Government insurance carriers provide coverage
• 92% of private insurance carriers provide coverage

* ***Kansas State and Texas Workers Compensation adopts guidelines***
What is Arthritis?

• Latin for inflammation of a Joint
  – Arthros = joint
  – it is = inflammation

• Arthritis – leading cause of disability in US

• Several different types

• All lead to destruction of the cartilage
Types of Ankle Arthritis

• Osteoarthritis (OA)
  – “Wear and tear”
  – Slow and progressive loss of cartilage
• Rheumatoid Arthritis
  – Immune system destroys cartilage
  – Often many joints attacked at the same time
• Post-traumatic Arthritis
  – Often after injury to ankle (sprain or fracture)
  – Can occur months or years after an injury
Hips & Knees – Well Understood: What about the Ankle?

- **End Stage OA of the Ankle - Principle Indications:**
  - Post-traumatic Arthritis (78%)
  - Primary Osteoarthritis (9%)
  - Secondary Osteoarthritis (eg, Rheumatoid Arthritis) (5%)

- **Different from Hip/Knee**
  - Dominantly Primary OA
  - Significant deformity present (63% have Coronal Plane Deformities)

- **Alignment:**
  - 55% Varus
  - 37% Normal
  - 8% Valgus
It’s just an ankle sprain....
Half are needed because of some kind of trauma, such as a break or chronic ankle sprain, and half because of arthritis, including rheumatoid arthritis.
Treatment

**Treatment Goals**
- Relieve pain/inflammation
- Slow disease progression
- Improve quality of life
- Restore/maintain functional independence

**Treatment Options**
- Medications
- Lifestyle changes
- Physical Therapy
- Bracing
- Surgery
Lifestyle Changes

• Avoidance of impact activities
  – Running, impact aerobics, treadmills

• Non impact exercise
  – Swimming
  – Biking
  – Yoga

• Cane or walker

• Weight loss
  – Ankle sees 5X body weight
Surgical Treatments

• Arthroscopic Debridement
  – Early stages
  – Small incisions/camera used to clean joint

• Arthrodesis (fusion)
  – Advanced arthritis
  – Fuse joint into single bone
  – Good outcomes, long recovery from surgery

• Arthroplasty (Joint replacement)
  – Advanced arthritis
  – Replace joint with implant
  – Preserves joint motion, but implant may loosen or fail over time
Ankle Replacement (Arthroplasty)

Objectives: Reduce Pain; Maintain Function

Procedure: The ankle joint is opened, bone is resected from the talus and the tibia, and the ankle replacement device is implanted. The device prevents pain and allows for ankle motion. Maintains patient function.

• Effective in reducing pain, correcting deformities, and stabilizing the joint.
• Allows the patient to maintain motion in the ankle joint and to maintain ankle function.
Arthroplasty vs. Arthrodesis

JOINT REPLACEMENT (STAR ANKLE)$^1$

- Enables motion at the joint
- Provides predictable pain relief (comparable to fusion)
- Can correct significant deformities of the ankle
- Moderate ‘non-weight bearing’ healing time (2-6 weeks)
- 6% revision rate @ 5 years$^2$
- May require device replacement (90% survivability of implant at 10 years)$^3$

FUSION

- Locks ankle joint at fixed position
- Provides predictable pain relief
- Can correct significant deformities of the ankle
- Prolonged ‘non-weight bearing’ healing time (2-4 months)
- 10% non-union rate$^4$
- May lead to arthritis in other joints of foot

4 Haddad, SL; Coetzee, JC; Estok, R; et al: Intermediate and long-term outcomes of total ankle arthroplasty and ankle arthrodesis. JBJS 89(9): 1899-905, 2007.