Knee Pain: Evaluation and Treatment

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Hamburg Location
4901 Camp Road, Suite 100

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Buffalo Orthopaedic Group

Urgent Care Center–Hamburg Location

• General orthopedics and sports injuries
• 4901 Camp Road, Suite 100
• Mon-Fri 8am-9pm and Sat 9am-1pm

Walk-ins welcome or call for an appointment
716-204-1101
Knee Pain/Injury

Acute Injury – Twist, Slip, Fall
Fracture/Broken Bone
Ligament Injury
Cartilage or Meniscus Injury

Chronic Pain/Injury
Meniscus Injury/Tear
Osteoarthritis Flare-up
Knee Anatomy

- Femoral condyles
- Tibial plateau
- Posterior cruciate ligament
- Anterior cruciate ligament
- Meniscus
- Meniscal ligament
- Patella
- Tibia
- Femur
Meniscus Anatomy

Crescent-shaped pad of fibrocartilage that sits on the end of the tibia (shin bone), a flat surface.
Meniscus Tear Patterns

- A. Vertical
- B. Oblique
- C. Radial
- D. Horizontal
- E. Complex
Degenerative Meniscal Tears

Frayed edges on the inner rim

May tear in multiple directions leading to a completely degenerated (frayed, worn, aged) meniscus
Degenerative Meniscal Tears

Flap of the meniscus often moves about in your joint

Some of your torn meniscus can catch in your knee (locking/clicking)
Treatment

Non-operative

NSAIDs – reduces inflammation

Physical Therapy - minimize swelling, normalize gait, and pain-free ROM, prevent muscular atrophy

Cortisone Injections – Reduce swelling and inflammation
Surgical Treatment

Arthroscopic Surgery
Minimally invasive outpatient procedure
Surgical Treatment

Partial meniscectomy/debridment

Torn tissue is removed, and the remaining healthy meniscal tissue is contoured to a stable, balanced peripheral rim.
WHAT IS ARTHRITIS?

Anatomy
Symptoms
Treatment options
Knee Arthritis

What is really inside my knee?
What is a meniscus tear?
What is arthritis?
What treatment options exist for me at my stage of the game?
What is a Total Knee Replacement?
• What does a TKA entail?
• When should a person have one done?
• What can I expect if I decide to have a TKA?
Knee Arthritis

What is Arthritis?

• Inflammation of the joint
• A loss of “smoothness”
Knee Arthritis
Knee Arthritis

**Osteoarthritis**
- Wear and tear

**Rheumatoid arthritis**
- Auto-immune disease

**Post traumatic arthritis**
- Fractures
- Ligament injuries
- Meniscus tears
Knee Arthritis
Symptoms

Pain
Stiffness
Swelling
Popping
Grinding
Symptoms

Decreased range of motion
Decreased activity level
Decreased quality of life
‘Miserable’
Knee Arthritis

Symptoms

- Cartilage wears away
  - Bones of the joint rub together

Pain may become severe and constant and may interfere with normal activities and/or sleep
Level of arthritis on x-ray NOT always predictive of symptoms
Diagnosing Knee Arthritis

Medical history
Physical examination
X-Rays
Blood tests

Source: www.AllAboutArthritis.com, 2003
What can I do about it?

**Mechanical/Physical**

- Weight loss
- Assistive devices
- Orthotics
- Braces (Supportive or Unloader)
- Physical Therapy
  - Strengthening
  - Flexibility
  - Ice/heat
What can I do about it?

**Oral medications/Supplements**

- Acetaminophen (Tylenol®)
- NSAIDS (Motrin®, Naprosyn®, Voltaren®)
- COX2s (Celebrex®, Vioxx® (off market))
- Narcotics (Oxycodone, Hydrocodone)
- Glucosamine/chondroitin
- Steroids (Hydrocortisone, Prednisone)
- DMARDs (Remicaide®, Enbrel®)
What can I do about it?

**Topicals**

- Voltaren® (cream, gel)
- Icy/hot type products
- Lidoderm® (patches)
What can I do about it?

**Injections**

- Steroid/cortisone
- Visco-supplementation
  - Hyaluronic acid
    - Euflexxa®
    - Synvisc®
    - Orthovisc®
    - Supartz®
    - Hyalgan®
What can I do about it?

Surgery

• Arthroscopic Surgery (Knee Scope)
• Total knee replacement (TKA)
Arthroscopic Surgery

Removes damaged soft tissue

• Less invasive surgery, possibly leading to shorter recovery times
• Great option for meniscal tears with varying degrees of osteoarthritis
• Sustained pain relief varies in advanced OA patients
Arthroscopic Surgery, continued

Benefits
• Outpatient surgery
• Less invasive
• May reduce recovery time

Disadvantages
• Pain relief may be temporary

Source: www.AAOS.org, 2003
Knee Replacement

Partial Knee Replacement

Total Knee Replacement
Total knee replacement

Treats the complete knee

- Metal and plastic prosthesis to replace femur, tibia and patella
Total Knee Replacement

When is it time?
Total Knee Replacement

When is it time for Replacement?

- Other Treatment modalities
- Activity Level/Dictates Daily activities
Total Knee Replacement

What happens:

- Before the procedure
- The day of the procedure
- After the procedure
Total Knee Replacement

Before the Procedure

- Pre-operative evaluation/Decision-making
  - History
  - Evaluation
  - XR
- Decision to Proceed
  - Scheduling
  - Medical review/Physical Exam
  - Internist
Total Knee Replacement

The Day of the Procedure

- Anesthesia
- Surgical Procedure
Total Knee Replacement

Anesthesia
- General
- Spinal
- Femoral nerve catheter
Total knee replacement
Total knee replacement

End of femur removed

Top of tibia removed
Total knee replacement
Total knee replacement

- Tibial components inserted
- Plastic spacer
- Metal tray
- Patellar implant inserted
Total knee replacement
Total knee replacement
Recovery in the First Month

Three day hospital stay
Home vs Rehab
Sutures or staples usually taken out 10-14 days after surgery
Motion exercises should be progressing

Source: [www.aaos.org](http://www.aaos.org), 2003
Recovery After Six Weeks

Swelling normal for first three to six months
• Elevate leg slightly and apply ice

Driving
• 2 to 4 weeks- Left knee replaced and automatic transmission
• 6 to 8 weeks- Right knee replaced

Return to work in 6 to 8 weeks depending on type of work

Symptoms continue to improve up until one year

Source: www.aaos.org, 2003
Thank You

QUESTIONS???
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