# Orthopaedic Referral Guidelines
## Tygerberg Hospital 2017

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Arthroplasty Unit

**Total hip and knee joint replacement**

The condition requiring hip and knee joint replacement is Osteoarthritis. Also used in Rheumatoid Arthritis, other inflammatory conditions, Avascular Necrosis, CDH and Post-traumatic arthritis.

The indications for joint replacement in the hip and knee are persistent pain, limited ambulation and night pain, despite full conservative therapy.

Joint replacement is a very successful operation and 90 to 95% of joint replacements will still be in place and functioning well at ten to fifteen years. A small number of patients experience complications which can be devastating and for this reason patients should not be considered for joint replacement until their condition has become chronic and conservative methods have failed.

**Primary treatment:**

- Weight reduction.
- NSAIDs and Paracetamol-based analgesics
- Activity modification.
• Walking aid (contralateral hand).

Refer when:
• Pre-existing medical problems have been optimised.
• Conservative measures have failed.

Bone Tumour and Sepsis Unit

Overview:
This unit manages primary bone tumours, soft tissue tumours involving the limbs and chronic sepsis of bone and joints.

1) Benign bone tumours:
Benign tumours, or lesions you suspect may be these, can be referred to this unit. Do not biopsy. A biopsy will be done by the unit if necessary. Some lesions such as small non ossifying fibroma do not require biopsy. The unit will advise whether any intervention is necessary.

Fractures through benign lesions such as simple bone cysts must be referred as an emergency (contact the registrar on call by telephone). Some benign conditions require long-term follow-up as they have the potential to undergo malignant change. These include multiple osteochondromatosis, and multiple or isolated enchondromas. Refer such patients even if they are not currently symptomatic.

2) Malignant primary bone tumours:

Once you have suspected a bone lesion is malignant, prompt referral is required. Take a full blood count and ESR to differentiate from septic conditions. A chest x ray will be required to rule out large pulmonary metastases. Do not biopsy the lesion - a biopsy will be done by this unit.
In adults myeloma is a common primary bone tumour. Do a ESR and protein electrophoresis in all adults with a suspected bone tumour.

If your x rays suggest a pathological fracture is present or likely please splint the bone appropriately. **Pathological fractures** must be referred as emergencies.

3) **Metastatic bone tumours:**

These are common above age 50. The Unit will manage:

- Large bony metastases from a known primary lesion. The patient may need prophylactic fixation if the lesion is over 50% of the diameter of the bone or is in the proximal femur. A **Mirel's score** of above 8 is an indication for prophylactic fixation.
- Bony metastasis with occult / unknown primary. The unit will investigate bony metastases that have no obvious primary lesion. Do a full blood count, ESR and chest X ray before referring.

4) **Chronic Osteomyelitis:**

Host factors are important and should be optimized before surgery any surgery is undertaken. Please check HbA1C, HIV status and CD4 count before referring. If a sinus is present do a pus swab, and start patient on an appropriate antibiotic. While the patient is waiting for his clinic appointment, begin appropriate treatment of the conditions undermining the patients host status.

**Emergency referral:**

- When an **abscess is present** the chronic osteomyelitis may require emergency drainage. The patient will be toxically ill and the limb will be acutely tender and fluctuant. Contact the registrar on call by phone if you think an abscess is complicating established chronic osteomyelitis.
- **Acute osteomyelitis** or septic arthritis: If the history is only days old and the child is toxically ill your patient needs to be referred as an emergency by telephoning the registrar on call.

5) **Musculoskeletal tuberculosis:**

Suspected **tuberculosis** of bone of joint will be managed by this clinic. We will manage TB of bone and the major joints. If the **spine, hand or foot** is involved please refer to the appropriate sub-specialty clinic.

Once we have confirmed diagnosis (this will include a biopsy), the patient will be referred to a day hospital for anti Tuberculous therapy. We will follow up your patient 3 monthly until the TB has been cured.

**What to do before referring:**

- Differential white cell count, and ESR  
- Splint
Hand Unit

Carpal tunnel syndrome
Carpal tunnel syndrome is a common disorder which in its early phases can be successfully treated with a combination of conservative measures. If the duration of the symptoms is less than six months, these measures are worth trying, and there is good evidence that they may be efficacious in eradicating the disease.

**Primary treatment:**

- Splinting with a Futuro splint, especially at night for six weeks.
- NSAIDs.
- Injection into the carpal tunnel.

**Refer when:**

- Symptoms persist despite the above conservative measures.
- Symptoms have been present for longer than six to nine months.

Dupuytren's disease
Dupuytren's disease is a common digital affliction affecting predominantly men, but occasionally women, characterised by the formation of palmar and digital nodules, pits and contractures which commonly occur at the metacarpophalangeal and proximal interphalangeal joints.

The aim of surgical treatment is the relief of contractures and surgery is not indicated until a contracture of some magnitude is present. Surgery is not indicated in the early phases of the disease when there are simply pits and nodules, or even bands that are not associated with deformity.

**Primary treatment:**

- None.

**Refer when:**

- There is a 30 degrees fixed flexion deformity at either the MCPJ or PIPJ.
- The patient cannot flatten their fingers or palm on a table.

Flexor sheath ganglion
These small ganglia arising from the flexor sheath can cause pain during grip.

**Primary treatment:**
Puncture or aspiration with a 21 gauge needle may disperse the lesion (50% will recur).

Refer when:
- The lesion cannot be emptied.
- The lesion appeared to be solid.
- There is doubt about the diagnosis.
- The lesion recurs and is symptomatic.
- The lesion is eccentric, i.e., not in the midline of the digit.

Wrist ganglia
Most outpatient consultations for ganglia culminate in explanation and reassurance that ganglia are harmless and many resolve spontaneously. 40% disappear for at least twelve months after aspiration. Surgical scars on the dorsum of the wrist can be more painful than the ganglion. The recurrence rate after surgery is about 10% for dorsal wrist ganglia and 30% for ganglia adjacent to the radial artery.

Primary treatment:
- Reassurance as above.
- Aspiration under local anaesthesia using a wide bore needle (16 gauge).
- Apply a firm bandage for one week to prevent recurrence.

Refer when:
- The lesion cannot be emptied.
- The lesion seems to be solid.
- There is doubt about the diagnosis.
- The ganglion recurs after aspiration and is symptomatic.

Trigger finger and thumb
Between 50% and 70% of cases are free of triggering at least twelve months after a single steroid injection into the tendon sheath.

Primary treatment:
- Injection into the tendon sheath using a 21 or 23 gauge needle exactly at the midline of the ray at the level of the metacarpophalangeal joint.
- The effect of the injection may not be seen for three to four weeks.

Refer when:
- Triggering persists.
- Triggering recurs.
Sports Medicine Unit

Urgent referral:
A tumour is suspected.

An injury to the anterior cruciate ligament or posterior cruciate ligament is suspected.

An injury to the posterolateral complex is suspected.

A meniscal injury is suspected and the person has locking of the knee.

Routine referral:

A meniscal injury is suspected, and symptoms interfere with the ability to work, or persist despite 6-8 weeks of rehabilitation by a physiotherapist.

A medial or lateral collateral ligament injury is suspected, and symptoms interfere with the ability to work or persist despite 4-6 weeks of rehabilitation by a physiotherapist.
Shoulder Unit

Shoulder pain
How should I assess a painful shoulder?

Exclude referred pain from- the neck

- diaphragm

- heart (e.g. ischaemic heart disease)

- lungs (e.g. apical lung cancer)

- polymyalgia rheumatic

(typically occurring in an elderly woman, presenting with bilateral shoulder pain associated with stiffness and loss of function and general ill health)

Referral
The diagnosis is uncertain.

The person has acute trauma or active elevation of less than 120 degrees.

A rotator cuff tear is suspected (i.e. obvious muscle wasting, significant rotator cuff weakness, inability to use the affected arm).

There is an inadequate response after 3-6 months of conservative treatment.

Consider earlier referral for certain groups for whom shoulder pain is particularly disabling (e.g. athletes involved in overhead sports, or people involved in heavy manual labour).
Foot and Ankle Unit

Hallux valgus and bunions
Hallux valgus is defined as an angle of greater than 15 degrees at the first metatarsophalangeal joint in the AP plain. A bunion is the formation of dorsomedial osteophyte at the first metatarso-phalangeal joint. There are many surgical options which achieve mixed clinical results and have a multitude of complications. Conservative measures should be tried before referral for surgical treatment.

**Primary treatment:**
- Advice on low heeled, wide forefoot shoes with soft leather uppers.
- Referral to chiropodist.
- Referral to orthotics (eg comfort shoes).

**Refer when:**
- There is severe deformity (overriding toes).
- There is severe pain from the metatarsophalangeal joint or bunion.
- Conservative methods have failed. -at least 6 months

Flat foot
Flat foot can either be flexible or fixed.
A flexible flat foot is flat when weight-bearing but forms a normal arch when nonweight-bearing or when standing on tip toe. Flexible flat foot is non-pathologic and requires no treatment.
Rigid flat foot may be caused by tarsal coalition or neuromuscular conditions and is pathological.
Adult Aquired flat foot-Unilateral Flat foot in an Adult usually caused by an Insufficient Tibilais Posterior Tendon

**Primary treatment:**
- Flexible flat foot requires no treatment.-Arch Supports

**Refer when:**
- Flat foot is rigid.
- Adult Aquired flat
- Other pathology is suspected.

Plantar fasciitis
Plantar fasciitis is a benign, usually self-limiting, condition which ultimately responds to conservative treatment and even in the presence of a calcaneal spur on an x-ray is not usually treated surgically. A calcaneal spur is not indicative of any disorder.

**Primary treatment:**
- NSAIDs.
- Silicone heel pad.
- Steroid injection under the trigger point.
• Physiotherapy for stretch exercises of plantar fascia and tendo-achilles

Refer when:
• There is doubt about the diagnosis.
• Conservative methods have failed. - at least 6 months

Diabetic Foot Charcot Neuropathy
• A chronic and progressive joint disease following loss of protective sensation
  o leads to destruction of joints and surrounding bony structures
  Clinically-Vague history of trauma o Swelling,
  o Deformity
  o Radiographs Destructive -Arthritis/Fractures

• Refer when:
  o All patients with normal Vascularity and no sign of Infection

Achilles Tendonitis/Tendonosis
• symptoms
  ■ pain, swelling, warmth
  ■ worse symptoms with activity
  ■ difficulty running o physical exam
  ■ tendon thickening and tenderness 2 to 6 cm proximal to Achilles insertion
  ■ pain throughout entire range of motion

• Primary Treatment
  ■ activity modification
  ■ NSAIDs
    ■ physiotherapy with eccentric training
    ■ local modalities
  ■ shoewear
    ■ heel lifts

• Refer when:
  • Conservative methods have failed. - at least 6 months
Spinal Unit

Back ache and sciatica

Simple back ache is a benign condition which does not usually require surgical intervention. The onset is generally in patients between the ages of 20 and 55 years. Pain originates in the lumbosacral region and may radiate to the buttocks and thighs but not below the knee. The pain is mechanical in nature, i.e. it varies with physical activity and varies with time. Patients with simple back ache are not unwell and the prognosis is good with 90% recovering from the acute attack in six weeks.

Sciatica is defined as unilateral leg pain (i.e. pain which radiates below the knee) which is greater in severity than the associated back pain and is most commonly the result of a prolapsed intervertebral disc. Pain generally radiates down the whole of the leg below the knee into the foot or toes and is associated with numbness and paraesthesia in a dermatomal distribution. There are signs of nerve root irritation which include reduced straight leg raise, which reproduces the distribution of the leg pain. Motor sensory and reflex changes are limited to one nerve root. Prognosis is reasonable and more than 50% of patients will recover from an acute attack within six weeks.

Primary treatment:
- Analgesia, anti-inflammatories, muscle relaxant.
- Bed rest for a maximum of 48 hours.

Referral:
- Should be made to the physiotherapy department, not to the orthopaedic department.
- If possible, referral should be made within 6 weeks of onset.

Beware red flags:
- There is difficulty with micturition.
- There is loss of anal sphincter tone and faecal incontinence.
- Saddle anaesthesia by the anus perineum or genitals.
- Widespread or progressive motor weakness in the legs or gait disturbance.
- Pain is constant, progressive and non-mechanical in nature.
- Sciatic symptoms are not resolving after four to six weeks of conservative treatment.
- The patient is systemically unwell.
- There is widespread neurology.
- There is structural deformity.

ESR is abnormal.
<table>
<thead>
<tr>
<th>Region</th>
<th>Clinical Condition</th>
</tr>
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<tbody>
<tr>
<td>CNS</td>
<td>Sports related concussion</td>
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<tr>
<td></td>
<td>Facial injuries</td>
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<tr>
<td></td>
<td>Sports-related neck pain</td>
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<tr>
<td>SHOULDER</td>
<td>Rotator cuff injuries/impingements</td>
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<td></td>
<td>Glenoidlabrum injuries</td>
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<td></td>
<td>Instability</td>
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<td></td>
<td>Chronic ACJ</td>
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<tr>
<td></td>
<td>Nerve entrapments</td>
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<tr>
<td>ELBOW/ARM</td>
<td>Extensor tendinopathy</td>
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<tr>
<td></td>
<td>Medial pain syndromes</td>
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<td></td>
<td>Posterior pain syndromes</td>
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<tr>
<td></td>
<td>Forearm stress #/chronic compartment syndrome</td>
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<tr>
<td>WRIST/ HAND</td>
<td>De Quervains</td>
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<tr>
<td></td>
<td>Flexor/ extensor tendinopathies</td>
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<tr>
<td></td>
<td>TFCC tears</td>
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<tr>
<td></td>
<td>Nerve entrapments/impingements</td>
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<tr>
<td>THORAX</td>
<td>Chronic thoracic pain</td>
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<tr>
<td></td>
<td>Costo-ternal / SCJ pain</td>
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<tr>
<td>LUMBAR</td>
<td>Pars stress #, Sports-related spondylolysis (not chronic mechanic LBP)</td>
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<tr>
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<td>SIJ disorders</td>
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<tr>
<td>BUTTOCKS</td>
<td>Chronic proximal hamstring tendinopathy</td>
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<td>Piriformis syndrome</td>
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<td></td>
<td>Deep nerve entrapments</td>
</tr>
<tr>
<td>HIP/ GROINS</td>
<td>Chronic strains/tendinopathy/ bursitis</td>
</tr>
</tbody>
</table>
Labral tears
Stress #
Neuropathies
“Snapping hip”/ Femoro-acetabular impingement

THIGH
Chronic/ recurrent strains
Myositis ossificans

KNEE
Chronic PCL/ACL (non-operative)
PFS
Patellar tendinopathy
O-Schlatter/ SLJ
ITBFS
Chronic bursopathies

LOWER LEG
Stress #
Periostitis
CCS
Achilles tendinopathy
bursopathies

ANKLE
“difficult ankle after sprains” (impingements/O-chondral lesions/S tarsi, etc)
Tendinopathies (med/ lat/ ant)

FOOT
Plantar fasciitis
Stress #
Tendinopathies (flexor/ extensor)/ entheseopathies
Neuromas/metatarsalgia

SPECIAL POPULATIONS
Children/ elderly
Women (esp Female triad)
Disabled
Chronic fatigue in athletes/ unexplained underperformance/overtrainingsyndrome