DR BOB JANG

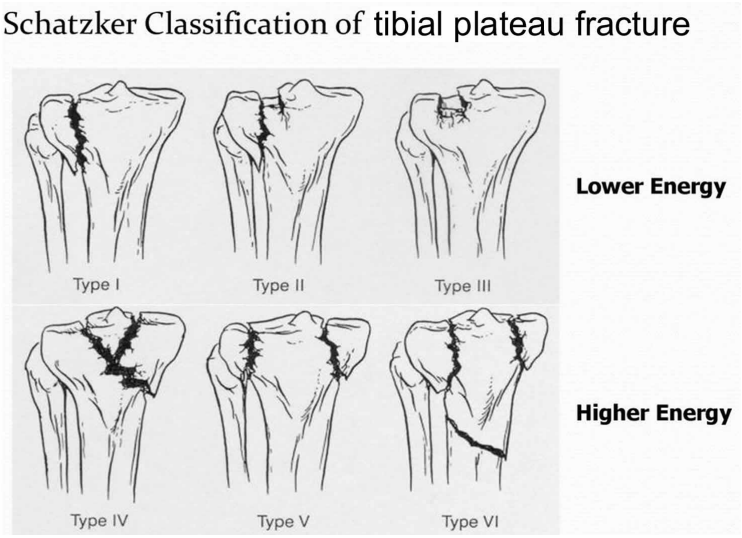
Orthopaedic Surgeon

Patient Name _____

Follow-Up Appointment: _____

TIBIAL PLATEAU FRACTURES

Tibial plateau fractures can be a devastating injury resulting in long term pain, stiffness and mobility issues. These injuries are hence treated aggressively to restore joint alignment and kinematics to help you get back on your feet ambulating with a functional and ideally a painless knee. These injuries can occur due to high energy trauma usually in men in their 30s and 40s. These can also occur with a low energy mechanism such as a trip and fall in women in their 60s and 70s.



You will present with a sore, swollen knee. You may have noticed the knee deform at the time of injury. Sometimes you may hear a crack within the knee joint. An urgent review in emergency with xrays and CT imaging (a 3D xray) is necessary to obtain a diagnosis and also to appropriately immobilise you in either a Velcro strapped knee splint (Zimmer/Richard splint) or an above knee backslab plaster.

There are various degrees of severity associated with the tibial plateau fracture. Some may be high energy resulting in significant swelling and neurovascular (nerve and vessel injury). These can be true emergencies resulting in an urgent trip to the operating theatre the same day as your injury to save your limb.

The orthopaedic registrar will review you in emergency and assess your swelling, pulses and nerve function in your limb. They will also check your hip and ankle joint or even your spine for associated injuries if you were involved in a fall from height or a motor vehicle accident.

Once your limb is splinted and you've been given analgesia, you will have 3D imaging (usually a CT scan but sometimes an MRI scan is also warranted). From here, the surgeon will decide whether you require surgery.

admin@DrBobJang.com.au www.DrBobJang.com.au
PO BOX 858, Leichhardt, NSW, 2040
(02) 8078 0633
Suite 209, Level 2 Strathfield Plaza
11 The Boulevarde
Strathfield NSW 2135

FAORTHA
FELLOW of the AUSTRALIAN ORTHOPAEDIC ASSOCIATION

Fellow of the Royal Australasian College of Surgeons

DR BOB JANG

Orthopaedic Surgeon

SURGERY

If your swelling has improved adequately to make incisions, you will be taken to the operating theatre and placed under a general anaesthetic. Depending on your fracture orientation you may have two incisions around your knee. You will have a stainless steel or titanium plate with screws inserted around your fracture.

Once surgery is completed, you will find your leg in a knee brace. You will not be permitted to place weight through the operated limb for a minimum of 6 weeks. We will allow you to bend your knee whilst your fracture heals. You will generally remain in hospital for 3-5 days post operatively to gain independence on crutches or a frame. In some instances, we may transfer you to a rehab facility to continue with you recovery until you're safe and independent enough to go home.

After discharge home you will follow up 2 weeks post surgery for a wound check and an xray of your knee at the discretion of the Orthopaedic registrar or Dr Jang (we don't always perform an xray). We will allow you to shower or bath without a dressing from this point on if your wound has fully healed. You will still need to keep the weight off.

Tibial plateau fractures can have long lasting debilitation. The degree of comminution (number of tiny pieces) of your cartilage and subchondral bone will determine if you have a higher risk of developing post traumatic arthritis. This may present years down the track with knee pain, swelling, stiffness and deformity. Treatment for knee arthritis varies from physiotherapy, analgesia to a total knee replacement.

admin@DrBobJang.com.au www.DrBobJang.com.au
PO BOX 858, Leichhardt, NSW, 2040
(02) 8078 0633
Suite 209, Level 2 Strathfield Plaza
11 The Boulevarde
Strathfield NSW 2135

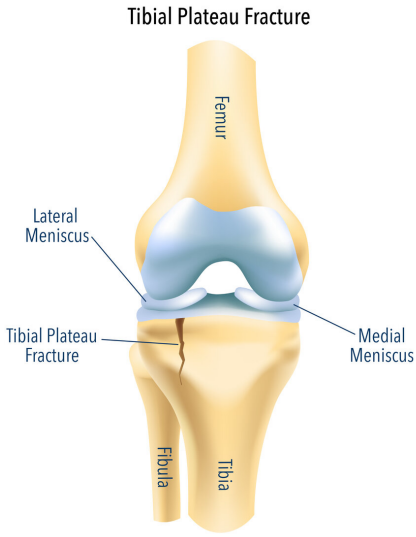
FAORTHA
FELLOW of the AUSTRALIAN ORTHOPAEDIC ASSOCIATION

Fellow of the Royal Australasian College of Surgeons

DR BOB JANG

Orthopaedic Surgeon

TIBIAL PLATEAU ORIF PROTOCOL



Stage 1 – Maximum Protection (0 to 2 weeks):
Ice, simple analgesia (paracetamol/ibuprofen) to reduce pain and inflammation. Use crutches or a frame to assist with non-weight bearing for 6 weeks minimum.
You will have a knee brace on with limited range of motion with the aim to gradually increase your knee flexion over the next 6 weeks.
Keep the knee above the heart for the first 3 to 5 days.
Quadriceps activating exercises to maintain muscle bulk.
Multi-plane open kinetic chain straight leg raising. Gait training with crutches whilst non weight bearing.

Week 2: Wound check with or without a new xray check.

Stage 2 - Progressive Stretching and Early Strengthening (Weeks 2 to 6)
Continue with modalities to control inflammation. Initiate global lower extremity stretching program. Begin stationary bike and pool exercise program (when incisions healed). Closed kinetic chain multi-plane hip strengthening on contralateral side. Continue working on knee range of motion exercises. Hydrotherapy permitted. Continue non weight bearing. Knee range of motion exercises in knee brace 0-90degrees. If you're young and your fracture fixation is very strong, you may not be placed in a knee brace. Dr Jang will inform you after surgery.

Week 6: Follow up Dr Jang rooms for a clinical review of knee range and xray of your knee.

Stage 3 – Strengthening and Proprioceptive Phase (Weeks 6 to 10)
Weeks 6 to 8: Provided your xrays show adequate healing, we will begin partial weight bearing at 25% of body weight and increase by 25% approximately every 3 days.
May progress to one crutch at 8 weeks as tolerated, gradually wean off of crutches by week 8 – 9.

Weeks 9 to 10: Normalise gait pattern. Advance stationary bike program; begin treadmill walking and elliptical trainer; Avoid running and impact activity. Initiate closed kinetic chain exercises progressing bilateral to unilateral Initiate proprioception training

Stage 4 – Advanced Strengthening and Initiation of Plyometric Drills (Weeks 10 to 20)
Initiate gym strengthening-beginning bilateral progressing to unilateral Leg press, heel raises, hamstring curls, squats, lunges, knee extensions.
Weeks 16 to 20: Continue with advanced strengthening Begin functional cord program Begin pool running program progressing to land as tolerated

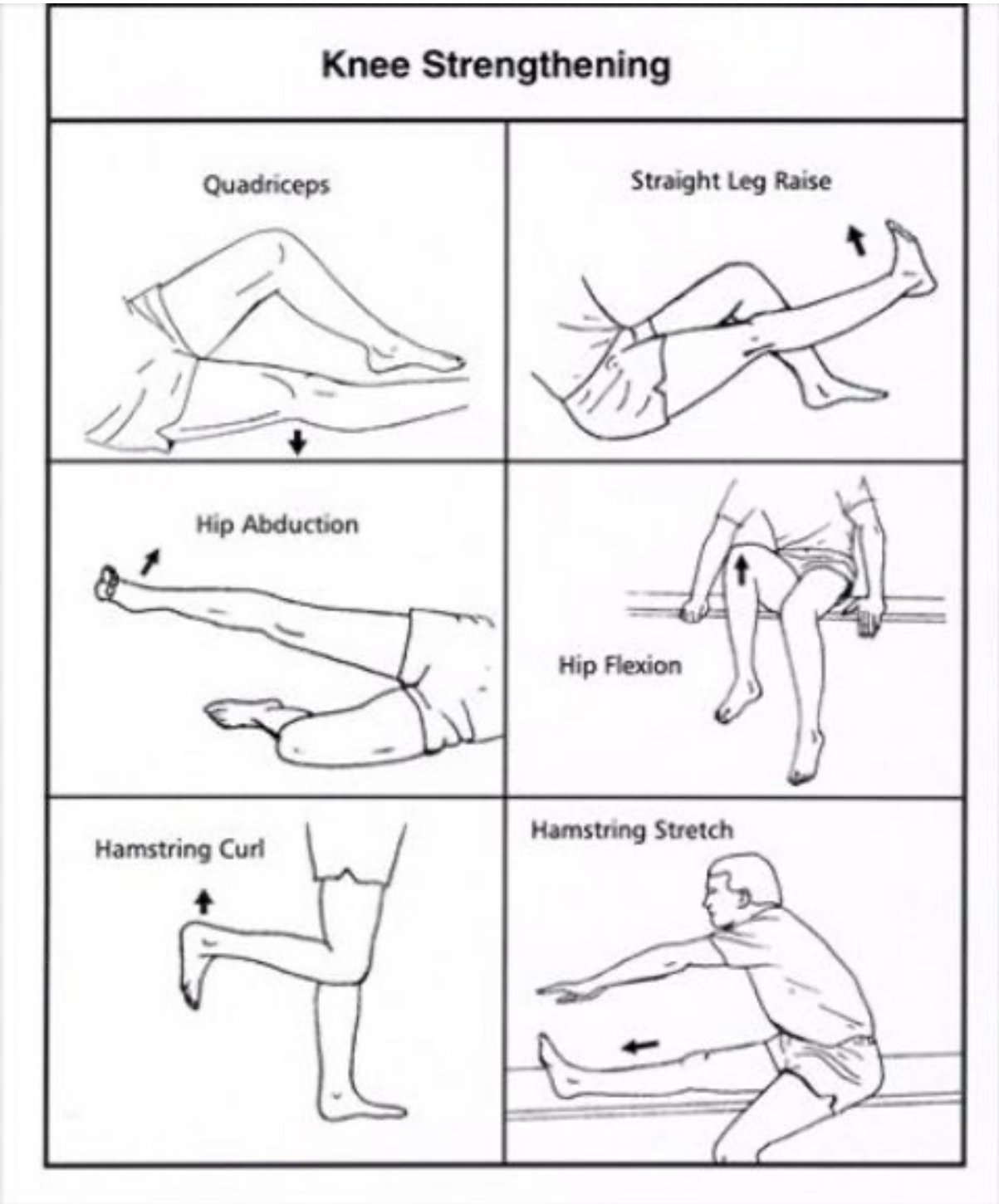
Stage 5 – Return to Sport Functional Program (Weeks 20 to 24)
Follow up with Dr Jang to implement sport specific multi-directional drills and bilateral plyometric activity progressing to unilateral as tolerated. Continue strengthening and range of motion exercises. Return to contact sports as tolerated.

admin@DrBobJang.com.au www.DrBobJang.com.au
PO BOX 858, Leichhardt, NSW, 2040
(02) 8078 0633
Suite 209, Level 2 Strathfield Plaza
11 The Boulevarde
Strathfield NSW 2135

FAORTHA FELLOW of the AUSTRALIAN ORTHOPAEDIC ASSOCIATION
Fellow of the Royal Australasian College of Surgeons

DR BOB JANG

Orthopaedic Surgeon



admin@DrBobJang.com.au www.DrBobJang.com.au
PO BOX 858, Leichhardt, NSW, 2040
(02) 8078 0633
Suite 209, Level 2 Strathfield Plaza
11 The Boulevarde
Strathfield NSW 2135

FAORTHA
FELLOW of the AUSTRALIAN ORTHOPAEDIC ASSOCIATION

Fellow of the Royal Australasian College of Surgeons