TOTAL HIP REPLACEMENT SURGERY
A PATIENT’S GUIDE

This guide outlines important information which you and your family need to know about the hip replacement operation. It outlines the operative and post-operative care that you will be given. Dr Ho, nurses and physiotherapists are dedicated to making your stay pleasant and your recovery speedy.

Your co-operation and assistance is essential, as your stay in hospital will depend on how quickly you recover. Whilst all the medical personnel will give you their support during your recovery period, by putting in a good effort you will be rewarded with a speedy recovery.

THE OPERATION

A human hip joint is made up by a ball (the head of the femur bone)) and a socket (the acetabulum of the pelvis bone). Osteoarthritis is one of the common conditions which damages this joint creating pain, stiffness and difficulty walking. The aim of a total hip replacement is to replace the damaged ball and socket with man-made components. The components are made of materials from metal and plastic. Ceramics are also used. The plastic (ultra-high density Polyethylene) used in total hip replacement is extremely tough and resistant to friction and wear. The metal usually is Cobalt Chromium Alloy or Titanium.

The components are fixed to the bone by either using a type of medical cement (Methacrylate) or by press fit. The components that work by press fit usually have a layer of coating which will attract bone to grow on it to further secure the fixation of the component. This new joint is expected to relieve pain, decrease stiffness and restore mobility. There are many designs of hip prosthesis available today and Dr Ho will help you to choose the one suitable for you. The operation is performed through a skin incision on the side of the hip and takes about 2 hours.
POTENTIAL COMPLICATIONS

More than 28,000 hip replacements are performed each year in Australia. Total hip replacement surgery is considered safe and effective. However, there are some potential risks and complications associated with the operation of a total hip replacement. Some of these complications are:

General medical problems

Some complications do occur after major surgery. These complications include heart attacks, strokes, lung collapse, pneumonia, various heart problems, kidney dysfunction and bed sores. In serious cases, it can be fatal. Patients who had a history of these conditions will be more vulnerable. Please alert Dr. Ho if you happen to suffer from some medical conditions so that these conditions can be assessed and if possible, optimised.

Infection

Infection can be a concern in any operation. Generally speaking, the infection rate after a hip replacement is not high. However certain groups of patients can be more at risk. Patients who are known to have a higher infection risk include patients who has/is: Diabetes, smoking, overweight, cancer, previous multiple operations to the hip, taking medication which decreases body defence (eg., immunosuppressant drugs). Infection rate may also vary amongst different hospitals from time to time. In severely infected cases the prosthesis would have to be removed. A new hip may or may not be able to be implanted at a later date. A mild infection is treated with clean-up and wash-out operations and intravenous antibiotics. This would mean a prolonged stay in hospital.

Deep venous thrombosis and pulmonary embolism

Clotting of the blood in the veins of the legs is a recognised complication of total hip replacement surgery. These clots sometimes detach and travel in the bloodstream to reach the lungs. This is known as a pulmonary embolism. This is a very serious condition and sometimes can be fatal. Every effort is made to minimise the occurrence of these complications. After surgery, you are encouraged to exercise and move your ankles as much as
possible. Early mobilisation helps to prevent these problems. On most occasions, you will be provided with compressive leg stockings that you should wear for 4 to 6 weeks. Anti-clotting medications are also often used. These could be in the form of injections or oral medications. (e.g. Clexane) Most Hospitals will offer a calf or foot inflation and deflation “air pump” to further enhance the prevention of clots.

Fat embolism

Fat from the bone marrow can reach the circulation and again travel to the lungs. This condition is quite similar to the previous complication of pulmonary embolism. This time the blockage is created by a large mass of fat rather than a clot. This can be a very serious complication.

Haematoma formation and Wound complications

Haemorrhage can occur in the surgical site. The blood accumulated at the site is known as Haematoma. Haematoma can sometimes lead to infection, wound breakdown or a delay in wound healing. Treatment may involve returning to theatre for cleaning of the surgical site and re-suturing.

Pressure sores

Pressure sores, especially of the heel area, can develop quickly after lying still in bed. They are prevented by avoiding inactivity in bed. It is necessary that one moves to relieve pressure from the heel and buttock (sacral) areas regularly.

Dislocation

Dislocation is always a danger after a total hip replacement. Dislocation can occur either early in the post-operative period or many years after the operation. Avoiding the so-called “risky positions” of the operated leg would minimise these risks (e.g. avoid deep squats). At times, dislocation results from malposition of the components and a revision operation may be necessary. Poor muscle control around the hip may also predispose to dislocation.

Blood Vessel and nerve injury
The hip is surrounded by a number of large blood vessels and the main nerves that supply the lower limb. These structures can be at risk from stretching or direct injury. Every precaution is taken to minimise the risk to these structures. The sciatic nerve and the femoral nerve could be at risk. Other nerves and vessels can be compromised during surgery. Damage to these nerves give rise to loss of sensation and paralysis of part of the leg.

**Fractures**

These complications are considered serious. Fractures of the shaft of the femur and fractures of the hip bone sometimes occur, especially when the bones are soft and weak, and in revision hip replacement operations. Fracture may also occur if you sustain a heavy fall following surgery. When this occurs, surgical fixation is usually needed.

**Loosening**

Your new hip replacement is not expected to last forever. Wear and tear and loosening are the main factors for the deterioration. You can help to prolong the life expectancy of your hip by looking after it. This means that you should remain active, but not over-active. Heavy impact sport activities and running should be avoided. Loosening often requires further operations such as a revision hip replacement.

**Limb length inequality**

Sometimes for the sake of achieving adequate stability and preventing dislocation of the prosthesis, your operated leg may be slightly longer or shorter than the other leg, usually longer. Unfortunately this is unavoidable. If after 6 months this leg is still longer than the other, with significant discrepancy (if more than 2cm), a shoe lift on the other side will address this problem. It is a well known fact that about 15% of normal people have a leg length difference of up to 1.5cm which they are unaware of.

**Limp**

After a hip replacement, some limping is not uncommon as part of the recovery and this should decrease over a period of a few months.
In a small percentage of patients, the limp may persist and may cause awkwardness, exacerbation of back pain and other concerns.

**Pain**

Pain may persist or recur after the operation and may require further operation(s).

**Breakage of part of the component of the hip prosthesis**

If this occurs, further revision operation(s) would most likely be required.

**Complications related to anaesthetics**

Your anaesthetist will discuss these with you on the day of your operation. If you have important issues to discuss with the anaesthetist, we can arrange that before your operation.

### STOPPING OF SOME MEDICATIONS BEFORE YOUR SURGERY

1. **Hormonal Replacement Therapy:** This is best stopped 1 month prior to your operation.

2. **Aspirin and similar Medications, e.g. Solprin & Cartia:** Cease taking 10 days before the operation.

3. **Anti-inflammatories, such as Voltaren, Vioxx, Brufen, Celebrex and Naprosyn:** Best to stop 3 to 5 days before the operation.

4. **Blood thinners such as Warfarin, Plavix, Iscover, Assasantin** will need to be stopped at specific time before operation. Firstly you need to find out from your Medical Specialist (e.g. Cardiologist) or your GP whether it is safe for you to go off these medications. Please inform Dr. Ho if you take any of these drugs so that the appropriateness and timing of stopping of these drugs could be carefully considered.
STOP SMOKING

For smokers, you need to stop smoking completely for at least one month prior to the operation. The complication rate greatly increases in patients who smoke.

PREPARING FOR SURGERY

**Medical evaluation:** Many patients with chronic medical conditions, like heart disease, will benefit from an evaluation by a specialist (such as a cardiologist) before the surgery to determine their fitness for operation.

**Specific x-rays & CT scans of knee/leg:** A specific set of x-rays and scans will be organized. Dr Ho will use these to obtain important measurements about your hip. This information will help Dr. Ho to determine how best to position your prosthesis during the operation.

**Other tests:** Several tests, such as skin swabs, blood and urine samples, will be needed a few weeks before your surgery.

**Dental evaluation:** Although the incidence of infection after hip replacement is very low, an infection can occur if bacteria enters your bloodstream. To reduce the risk of infection, major dental procedures (such as tooth extractions and periodontal work) should be completed before your total hip replacement surgery.

**Urinary evaluation:** People with a history of recent or frequent urinary infections should have a urological evaluation before surgery. Male patients with prostate problems should consider completing required treatment with a Urologist before undertaking hip replacement surgery.

**Attending a ‘Pre-admission Clinic’ at the hospital:** These clinics are available at The Sunshine Coast Private Hospital at Buderim and the Nambour Selangor Hospital. An appointment will be made for you at the relevant Pre-Admission Clinic by Dr Ho’s receptionist. The pre-admission nurse will check the details of your regular medications. Some patients may have individual needs during their hospital stay and the nursing staff will help you to assess and arrange these. An ECG tracing of your heart beats will be obtained for health checks. You will also be given special shower soap to use just before your operation.
About the ‘Rehabilitation Ward’: Rehabilitation wards are available at both The Sunshine Coast Private Hospital at Buderim and the Nambour Selangor Hospital. Most patients find it very beneficial using this facility. Once the patient’s general condition is stable after the operation (usually around day 2-4 post-op), they are transferred to the Rehab ward for about 5-10 days where they will receive comprehensive physiotherapy in a dedicated set-up.

Maintain the skin of the legs in good condition: Please refer to the additional sheet.

YOUR HOSPITAL STAY

Admission: Dr Ho’s secretary will arrange for you to be admitted into hospital the morning of your surgery. The operation will be scheduled for the afternoon. Prior to the surgery, the hospital nursing staff will prepare you for theatre. This includes changing into a theatre gown, clipping hair around the operative site and the application of a skin disinfectant lotion.

Anaesthetic: The operation usually takes about 2 hours. The patient either undergoes a general anaesthetic or a regional anaesthetic. A regional anaesthetic (eg., a spinal anaesthetic) will numb any feeling from the waist down and you are not completely asleep during the operation. Often the anaesthetist also performs a nerve block to help the pain (eg., a femoral nerve block). After admission you will have a chance to meet your anaesthetist who will discuss the most suitable form of anaesthetic for you.

Pain Management: When you leave the theatre after your operation, you will be linked to a few tubes at various parts of your body. These include an intravenous cannula, which allows you to be given fluids when you are not able to take in a lot of fluid by mouth. This also allows for the effective administration of drugs. Often the effect of a spinal anaesthetic or nerve block will continue to give good pain relief after the operation. Some numbness and weakness in the leg and an inability to pass urine may occur temporarily for a short time. For additional pain relief, some patients may be given a ‘patient-controlled anaesthesia’ (PCA). This pain-killing injection is delivered to you by your own command at the push of a button. The nursing staff will explain how to use this. Pain control is also available in the form of pain tablets or by
muscular injections. (Occasionally as an alternative, patients have an epidural line extended from the lower spine. This is a form of pain relief administered by the anaesthetist and the dose is pre-adjusted to allow sufficient pain relief).

**Wound Drain:** Some patients may have a plastic drain which drains excessive blood away from the wound and collected in a sterile bag. This is usually removed by a nurse the next day.

**Urinary Catheter:** Many patients have difficulty passing urine immediately after a hip operation. A catheter facilitates the passage of urine and is often inserted shortly after the hip operation in the theatre. They are removed a day or two after the operation.

**Blood Clot Prevention:** Dr Ho may prescribe one or more measures to prevent blood clots and decrease leg swelling. These may include compression stockings, cyclically inflating calf pumps (or compression boots), and blood thinners. Foot and ankle movement also is encouraged immediately following surgery to increase blood flow in your leg muscles to help prevent leg swelling and blood clots.

**Physical Therapy:** Most patients begin to walk with crutches the day after surgery. A physiotherapist will come daily to teach you specific exercises and how to use the crutches properly.

**Take deep breaths and use oxygen prongs/masks:** To help prevent sputum from clogging up the airways, it is important to take frequent deep breaths. Your nurse may provide a simple breathing apparatus called a spirometer to encourage you to take deep breaths. Keep the Oxygen nasal prongs on while you are sleeping. This will aid your breathing and wound healing.

**YOUR RECOVERY AT HOME**

Following your discharge, please make an appointment to see Dr Ho in 1 to 2 weeks for follow-up.

**When you go home:** Although you will be able to walk on crutches or a walker soon after surgery, you will need help for several weeks with such tasks as cooking, shopping, bathing and doing laundry. It is advisable to arrange a family member or friend to stay with you for a few weeks. If
you live alone, it is highly advisable that you use the Rehabilitation Ward for further recovery. Dr. Ho will help you to book this prior to your admission. When you go home from the hospital, a discharge planner can help you make arrangements to have someone assist you at home.

**Home Planning:** Several modifications can make your home easier to navigate during your recovery. Make sure walkways at your home are unobstructed and not slippery. Beds and chairs should be of sufficient height (e.g. 19 – 21 inches, or 47 – 53cm from the floor), as low chairs or beds could predispose you into a “risky position”. Chairs with arm rest and high back provide more support when sitting and more leverage when getting in and out. Use an elevated toilet seat or commode to help getting on and off the toilet. Install grab bars around the toilet if you need more support getting on and off the toilet. Shower chairs will initially aid your showering. Grab bars on the side of the shower would also be helpful.

**Wound Care:** The wound should be covered with waterproof dressing for at least 14 days after the operation. Please ask a medical personnel to change the dressing if there is an excessive collection of blood, the dressing is leaking or peeled back and no longer waterproof. The wound is secured by small metal clips. Dr Ho recommends these be removed on day 12 post-operatively. This will be carried out by either nurses in the hospital, a visiting nurse from Blue Care or Dr Ho.

**Avoidance of risky positions:** For 3 months after the operation, dislocation of the prosthesis is a significant risk. Please observe the followings:
- Do not bend your body forward when sitting and bend no more than 90 degrees when standing. Activities such as putting on socks, pants, cutting toenails, tying shoelaces will require help from someone or use of aids and it is best not to attempt to do them yourself.
- Do not cross your legs while sitting or lying in bed.
- Do not twist your healing leg or pivot your hips when getting out of bed or when walking or standing.

**Travel by car and driving:** Dr Ho advises patients to wait 4 weeks from surgery before getting in a car as a passenger. Please ask your physiotherapist how to get in and out of a vehicle without putting your hip replacement in “risky” positions. Once you are comfortable with the
technique and you are walking well without the need for walking aids you could consider a return to driving.

**Compression Stockings:** Please wear your anti-blood clotting elastic stockings on both legs for a period of at least 4 weeks after the operation.

**Continue to take your special Blood Thinner:** Shortly after your operation, you will be prescribed a blood thinner which you received daily for prevention of blood clot in the legs (DVT). This could be in a injectable form (e.g. Clexane) or tablet form (e.g. Xarelto, Aspirin). You should continue to have them for no less than 4 weeks after the operation.

**WHAT TO EXPECT AFTER YOUR OPERATION**

Pain usually resolves within 6 weeks from surgery. By then most patients are able to walk a reasonable distance with a walking stick. Joint stiffness, weakness or discomfort is common. These problems resolve with time. Further physiotherapy exercise program will help too.

Generally it takes about 3 months to “get over” the operation completely.

Even after complete healing, you must avoid putting excessive stress on the prosthesis. Activities such as running or high impact sports are best avoided. Watch your body weight as overweight can lead to premature failure of the hip replacement due to wear and tear and loosening.

Your new hip may activate metal detectors required for security in airports and some buildings. Tell the security agent about your hip replacement if the alarm is activated. Dr. Ho’s office is able to supply you with a hip replacement patient card for you to show in situation like this.