

## **Your Fractured Acetabulum**

A guide for patients about the injury and  
post operative recovery

**Trauma and Orthopaedics Department**

## Contents

Introduction	3
Why are you at St George's Hospital	3
Acetabulum fractures	3
Surgery for acetabulum fractures	4
Are there any risks or complications?	4
After your acetabular surgery	6
What should I expect after my operation?	7
Being transferred or discharged	8
Medication	8
Follow up appointments	9
Prognosis	9
Post traumatic stress	9
Physiotherapy	10
Getting up	12
Occupational therapy	13
How you and your family can	15
Nutrition and recovery	15
Further information	16

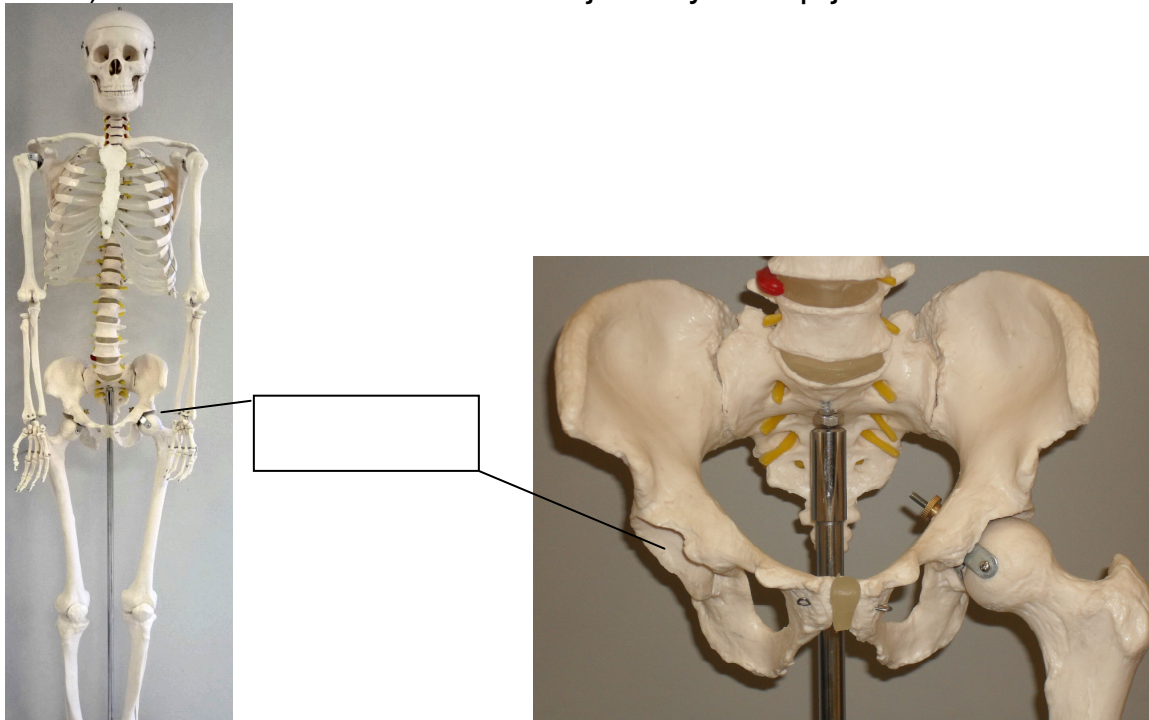
## Introduction

This information is for patients and their families, about having an operation to repair a fractured (broken) acetabulum (socket of the hip joint) at St George's Hospital. It explains

- what the operation involves
- risks and side effects
- what you need to do after the operation.

## Why are you at St George's Hospital?

You have been admitted to St George's Hospital with a broken hip socket, although you may have other injuries as well. The acetabulum is a cup-shaped hollow in the pelvis into which the head of the femur (thigh bone) fits to form a ball and socket joint - your hip joint.



St George's hospital is the largest specialist centre for fractures of the acetabulum in the UK with several patients being referred from other hospitals each week. Over many years this has led to the development of very specialised expertise and knowledge.

## Acetabulum Fractures

Acetabular fractures are uncommon, and generally occur from:

- road traffic accidents
- falls
- sporting injuries (less common).

There are many ways the acetabulum can break. Imagine breaking a soup bowl – sometimes it may break into only two pieces, whereas other times it will completely shatter.

Not all fractures require an operation, and sometimes treatment will involve not walking on the fracture (for example, using crutches) and careful monitoring with x-rays. Occasionally the decision whether to operate or not cannot be made using x-rays or scans (CT scan), and we may need to assess the stability of your fracture using x-rays in the operating theatre.

### **Surgery for Acetabulum Fractures**

If you require surgery, this can be done in several ways. The exact surgical plan will be discussed with you before you are asked to consent (agree) to surgery. In general, most acetabular fractures are operated on either through the buttock (bottom) muscles, or through the groin area (between the legs). Surgery generally involves putting the pieces back where they came from and holding them there with plates and screws.

Your operation should take between one and two hours. The operation can take longer if your operation is complicated. Most of these operations require a general anaesthetic. Whilst you are asleep you will be unaware of what is happening during the operation. Please ask the nurses for the booklet called **You and your anaesthetic**.

Depending on how complicated your surgery is, you may spend some time in intensive care or the high dependency unit after your operation. You may also just spend a few hours in the recovery unit while you recover from the anaesthetic before being moved to the ward.

### **Are there any risks or complications?**

There are a number of complications that can occur after acetabular fractures, usually related to the injury but occasionally to surgery. It is important that you tell us if you become aware of any of these, because early treatment can be more effective.

#### **1. Arthritis**

The biggest long term complication of a broken acetabulum is the development of arthritis. The main reason we operate on these fractures is that we know from past experience that if we leave the fractures in a poor position, although they will often heal, arthritis may follow within five

years. Statistically, even if fracture surgery is successful, up to one in five people go on to require a hip replacement within five years. This is mainly because of the amount of damage done to the joint surfaces at the time of injury. This means that even if the pieces are put back together perfectly, the cartilage (soft tissue) on the joint surface is damaged beyond repair. In some cases the bone is crushed and simply doesn't fit back together properly, or the bone loses its blood supply and dies over the next two years. However, even in these complex cases, many patients will avoid hip arthritis for many years after successful surgery and it is therefore generally the best option.

## **2. Sciatic Nerve Injury**

The most common early complication of this fracture is nerve damage, most often to the sciatic nerve. This is a big nerve that passes down the back of your thigh and branches into the lower leg. Symptoms can vary and include numbness or pain in the foot, calf or thigh, weakness of the foot and ankle, or complete inability to move the leg.

Other nerves can also be damaged, leading to similar symptoms in other parts of the leg. Nerve injuries can take many months and sometimes years to recover, having no recovery at all is very unusual. If the sciatic nerve is injured by the fracture then it will usually be looked at during surgery, and more information can be obtained regarding the likelihood of recovery.

## **3. Infection**

Infection is another possible complication, against which many measures are taken including antibiotics at the time of surgery. Infection usually presents with:

- pain
- redness
- discharge (oozing) from the wound
- occasionally a feeling of being generally unwell.

If you think your wound is infected after you have left hospital you should contact your GP. If they want to admit you to hospital it is best if you are re-admitted to St George's hospital.

## **4. Difficulty passing urine**

This means you need a urinary catheter (a tube to drain the urine from your bladder) for a few days after surgery, until you are able to use a bedpan or toilet.

## **5. Chest infection**

This might mean that you need a course of antibiotics.

## **6. Other anaesthetic complications**

These can occur during or after any big operation. This includes problems with your bowel and heart. They are usually caused by the stress of surgery making an already existing condition, which may or may not be known about, worse. The anaesthetist will see you before your operation and can explain these risks in more detail.

### **Possible Complications**

- Pain
- Bleeding which can happen during or after the operation. A blood transfusion is sometimes needed.
- Blood clots in your legs. These can travel to the lungs and cause a pulmonary embolism (a clot in your lungs). You will be given blood thinning tablets to help with this – there is more information on this on page 8.

To minimise risks, it is important that you follow all instructions in this booklet as well as those given to you by your doctor, nurse and therapy team.

### **After your acetabular surgery**

After surgery, you will not be allowed to put any weight through the broken side for 12 weeks (three months) – you will be given crutches or a frame to help with this. This is to protect the fracture from moving until it heals – the metal plates can hold bone against some forces but not against the weight of walking. If the fracture moves and heals in a different position then the outcome will most likely be worse in the long term. This can lead to:

- long term pain
- the development of early arthritis
- a permanent limp.

Other things that you can do to help your fracture heal well include:

- eating a good diet
- following the advice of your physiotherapist
- not smoking.

## **What should I expect after my operation?**

### **On the day of your operation**

- You will need to rest until the effects of the anaesthetic have passed. You may not be able to feel or move your leg for several hours with some types of anaesthetic.
- When you awake you may feel some pain or discomfort, the nursing staff can give you something to ease this.
- You will have an oxygen mask on; this will usually be taken away a day or so after your operation.
- You may also feel slightly nauseous (sick), and the nursing staff can give you something to ease this.
- The nursing staff will check your pulse, blood pressure and temperature frequently during the first 24 hours after your operation.
- You will notice that you have a drip in your arm; this gives you fluids until you feel well enough to eat and drink properly.
- You will also have a urinary catheter, which drains urine from your bladder until you are able to use a bed-pan or toilet.
- After your operation you may also have a blood transfusion to replace some of the blood lost during the operation.
- You will have a large dressing covering your wound and you may also have a drain in your wound. The drain removes excess fluid from around the operation site.
- While in bed you should take frequent deep breaths to help keep your chest free of infection.
- Doing regular ankle and foot-pumping exercise will help keeping the blood moving around your body.
- During your hospital stay you will wear elastic stockings to help your circulation. These can be removed for you to wash your legs, and should be laundered regularly.
- While in bed, and also if sitting for long periods of time, it is important that you change your position regularly. This will help prevent you developing any pressure sores, especially on your bottom and heels. The nursing staff can advise you about this.

### **On the first day after your operation**

- You will be sitting on the edge of the bed or into a chair with the help of your nurse or physiotherapist.
- Your drip may be removed, your wound may be re-dressed and if present the wound drain may be removed.
- Your urinary catheter will remain until you have become more mobile around the ward and able to use the commode.

- Your physiotherapist will instruct you on your exercise programme. Please refer to the physiotherapy section of this booklet, on page 10.
- You will be seen by an occupational therapist (OT) who will discuss or practise strategies with you for managing activities of daily living (the tasks you need to do on a day to day basis).
- The OT will give most patients a form for measuring the height of furniture at home, this is to check that you will be able to get on and off these pieces of furniture and so they can arrange equipment for you if necessary.
- The ward encourages patients to wear their own clothes and shoes brought in from home as soon as possible to help you feel normal.

### **Within the first five days after your operation**

- You should be mobile with either a frame or crutches. You will not be allowed to put any weight through your leg for the first three months (see page 12 for more information).
- You will be able to sit out of bed for longer periods, including all meals.
- You will be able to dress yourself in your own clothes with help from your care team.
- You will be able to shower or wash with help from your nurses.

Please note the above is only a guide and in some circumstances progress may be slightly quicker or slower than the plan above. At this time the team will also be looking into your discharge and planning for your return home with you.

### **Being transferred or discharged**

In some cases you will be transferred to your local hospital and this will be done with hospital transport. If you are discharged home from St George's Hospital you must arrange for a friend or relative with transport to collect you.

### **Medication**

After your operation, in hospital you will be started on warfarin tablets to thin your blood. This is because after acetabular fractures you are much more likely than normal to suffer deep vein thromboses (DVTs). These are blood clots - usually in the calf veins. We put all acetabular fracture patients on this tablet for a fixed time of three months, unless there are other complications. Being on warfarin requires a blood test every week



or two weeks, which should be organised for you before you are discharged. After three months this tablet can be stopped.

### **Follow up appointments**

After discharge from hospital, you will usually be reviewed in the fracture clinic at 6 weeks, 12 weeks, 6 months and 12 months after your injury. At each visit you will be seen by a doctor, and x-rays will be taken. We will also ask you to fill out forms at each visit which will help us to document how well you are doing over time. The information from these forms is anonymous but highly useful to us, and over time will enable us to improve the service we provide. It is important that you as a patient understand that you have a significant part to play in the recovery from your injury, but also that you can help to improve the service so that future patients may benefit.

The risk of problems from acetabular fractures, and especially developing arthritis, goes on for many years, and for this reason we follow-up patients indefinitely. Therefore, after your clinic visit at one year, we will also arrange to see you at two years, five years, ten years and beyond.

### **Prognosis**

After most acetabular fractures, three months later you will be allowed to walk without crutches (although this is best started with the help of a physiotherapist) and start to return to a normal life. How quickly people get back to normal is very variable, and depends on many factors including:

- your age
- the type of fracture
- how it was fixed
- other injuries
- other medical problems.

It is important to remember however that you will keep improving for at least 12 to 18 months after your fracture, and sometimes even up to two years. If you have any specific questions about starting other activities (such as driving and sport) then bring this up at one of your clinic visits.

### **Post Traumatic Stress**

As these injuries are often a result of a serious accident, post traumatic stress can occur. If you would like more information there is a booklet available on your ward (Post-traumatic stress disorder: the treatment of

PTSD in adults and children). The sister in charge can also refer you to our chaplaincy service for further support.

## Physiotherapy

### Before your operation

- You may be seen pre operatively by the physiotherapist who will test the power (strength) and sensation (feeling) in both of your legs.
- The physiotherapist may listen to your chest and teach you how to clear any phlegm if necessary.
- The physiotherapist will teach you the following exercises which you can start immediately and should continue to do soon as you are able, after the surgery.

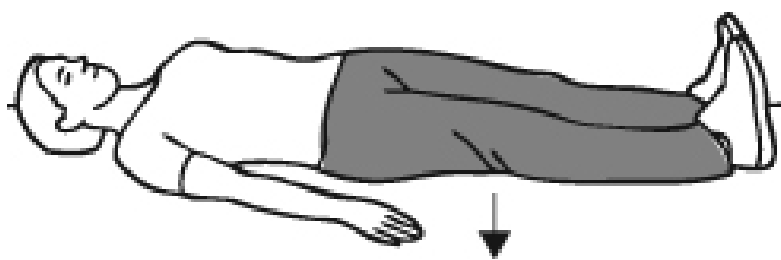
### Exercises

#### 1. Foot pumps



Move your feet briskly up and down.  
Repeat 10 to 15 times every hour.

#### 2. Static quads (thigh squeezes)



Tighten your thigh muscles by pushing the back of your knee into the bed (in other words straightening your knee as much as possible)

Hold for a count of five, and then relax  
Repeat 10 times every hour.

### 3. Heel slides



Slide your heel towards your bottom, so your hip and knee bend.

Then straighten your leg. Your physiotherapist may help you move your injured leg at first, until you can manage the exercise on your own.

Repeat 10 times, three times a day.

### After your operation

- Continue the previous exercises you were shown before the operation.
- The physiotherapist will help you move your hip joint:
  - up and down (flexion and extension)
  - out to the side and back (abduction and adduction)
  - turn it in and out (internal and external rotation).
- The physiotherapist will show you some additional exercises and advise you when to start them. The following exercise should be done at least four times a day, as you are able. Start with 10 to 15 repetitions for each exercise. You can increase the number of repetitions as your condition improves.

### 4. Leg position

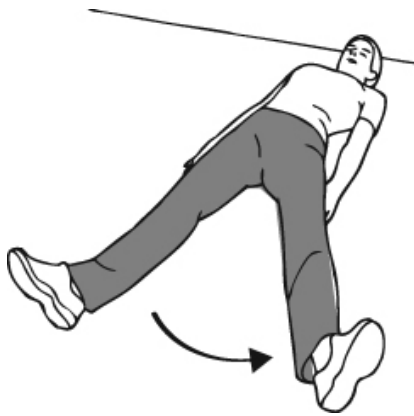


When you are lying down, your leg naturally turns outwards. For this exercise, turn your whole leg inwards so that your foot is facing your other leg.

Hold this position for five seconds, and then relax.

Repeat five times

### 5. Hip abduction (leg out to side)



Slide your leg out to the side, keeping your knee straight. Then return your leg back to the middle. Your physiotherapist may help you move the injured leg at first, until you can manage the exercise on your own. Repeat 10 times, three times a day.

### 6. Inner range quads (leg lifts)



Place a rolled towel under your knee on the operated leg. Tighten your thigh muscles and straighten the knee, lifting your heel off the bed.

Hold your leg straight for a count of five seconds, and then lower it gently.

Repeat 10 times

### Getting up

When the surgeon has seen the x-rays taken after your operation you may be able to start getting up with the physiotherapist, depending on any other injuries you may have.

- You may feel dizzy or light headed the first few times you get up as your body adjusts to an upright position after a period of bed rest.
- You will use a frame at first but progress onto elbow crutches. You will not be allowed to put full body weight on the operated leg for three months (non-weight bearing or touch weight bearing) but your physiotherapist will discuss this with you.

Once you have progressed from your frame to getting around with crutches on your own, you will be taught how to climb stairs.

Almost from your first day with us, we will be talking to you and your family or carer about arrangements for your care when you go home.

This is so that any necessary plans can be made before you are discharged home. When you are safely managing the above things on your own and there are no other nursing or medical problems, your discharge or transfer date will be discussed.

**You may be given additional exercises or advice. Please use the space below to make any notes.**

---

---

---

---

---

---

---

---

**Precautions**

**You must not roll towards or lie on your operated side for long periods of time for the next three months.**

Any additional precautions can be written below

---

---

---

---

**Occupational Therapy**

**What is occupational therapy?**

Occupational therapy (OT) staff help people of all ages who have physical, mental or social problems as a result of accident, illness or ageing, to do the things they want to do. These could be daily activities that many of us take for granted, from grocery shopping or brushing your teeth, to more complex activities such as caring for children, succeeding in studies or work, or maintaining a healthy social life.

After an acetabular fracture an occupational therapist plays an important role in helping with all daily activities and this will include planning for your discharge and taking into account any of your needs relating to your home environment.

**What things will the OT assess and recommend?**

Your OT will ask you to give information about your home, which may include measuring the heights of some of your furniture at home so you

can practice standing from or getting onto hospital equipment (such as beds and chairs) of similar heights before leaving hospital. Providing these details about your home environment will assist with recommending a discharge plan for you. If necessary, the OT will arrange for your home to be assessed by a member of the OT team in Social Services.

Apart from the home environment your OT will talk with you about how you were completing your day-to-day tasks before coming into hospital, including work and leisure activities. They will then look at what you are able to do now, usually focusing on the things that are most important for returning home from hospital. This might include getting into the bath or shower, or preparing a drink or meal. Your OT will then work with you to help you to return to your previous abilities if you are able. This may include practice of these tasks or provision of equipment.

Sometimes equipment may be recommended to increase your independence or make activities easier. Some examples are summarised below:

- Bathing – a bath board for over the bath or a perching stool for a strip wash.
- Small aids – a reacher to pick items up off the floor, long handled shoe horn to assist with putting on your shoes and socks.
- Toileting – a raised seat to make the toilet seat higher or a frame to give you arms to push up from or a commode if required.
- Seating –special blocks to sit under your armchair to raise it or a high backed chair.
- Bedroom – special blocks to raise your bed or a lever on the side of the bed to help you from lying to sitting.
- Wheelchair – if you require a wheelchair for mobility the OT will also consider equipment to assist you to get on and off the wheelchair.

The OT will assist you to find somewhere in your local area to provide this equipment. Unfortunately, more often than not, due to the short term need for this equipment there will be some cost to you.

Keeping this in mind the OT can keep practicing with you to ensure that you only need to consider the equipment that is essential for discharge. Further practice with this equipment may be required once you return home and this can be arranged by your care team with your local rehabilitation service.

## **How you and your family can help?**

Simple things like bringing in your own clothing early in your admission to allow for a return to your usual day-to-day tasks can be very helpful.

Getting up from bed and dressing in your own clothes can often make a huge difference in your rehabilitation.

Providing accurate information about the layout and the heights of the furniture at home would assist the OT to assess the suitability of your home environment for discharge. Digital photos can also assist with this process and the OT may discuss this with your family. Your family or friends may need to be available to allow access to local services to assess your home when delivery of equipment is required.

## **Nutrition during recovery**

During your recovery it is important for you to maintain a healthy diet.

Bone fractures can put a lot of stress on the body which means the body needs extra nutrition to help the healing process.

The most important nutrients in healing bones are

1. **Protein** for growth and repair of cells and tissues: meat, poultry, fish, eggs, legumes (peas, beans, lentils, dahl), cheese, milk and yoghurt.
2. **Carbohydrates and fats** for energy: breads, breakfast cereals, pasta, potatoes and rice.
3. **Vitamins and minerals** to help the body repair itself. These are found in all foods but you may require supplements to provide your specific needs.

Try to ensure a protein and carbohydrate food is included in each of your meals. A balanced diet is one with plenty of variety so include fruit and vegetables too.

Your appetite can be affected during your recovery and you may not feel hungry. This can be caused by:

- medications
- pain
- nausea
- decreased mobility
- disrupted bowel motions (diarrhoea or constipation).

If you feel that your appetite is poor and/or you have recently lost weight please speak with your nurse as you may require a referral to the ward

Dietician. Supplement drinks are available that will provide important nutrition.

If you have any special dietary requirements, allergies or intolerances please notify your nurse who can help arrange the correct diet for you.

Further information

The ward contact details are below if you have any questions.

**St George's Healthcare NHS Trust**

St George's Hospital

Blackshaw Road

London

SW17 0QT

Website: [www.stgeorges.nhs.uk](http://www.stgeorges.nhs.uk)

Telephone: 020 8672 1255 (hospital switchboard)

- Gunning ward extension: 3219 / 3218
- Holdsworth ward extension: 3388 / 3216

Produced July 2011, to be reviewed July 2014

