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## WHIPPLE'S PROCEDURE

*THIS INFORMATION REFLECTS THE PERSONAL PRACTICE OF DR KELLE SLATER ONLY  
AND DOES NOT SUBSTITUTE FOR DISCUSSION WITH YOUR SURGEON*

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### **YOUR ADMISSION DETAILS:**

Your admission date is: \_\_\_\_\_

Date of your operation: \_\_\_\_\_

Fasting time from: \_\_\_\_\_

Greenslopes Private Hospital Admissions (Phone 1800 777 101) will contact you **the day before** you are due to enter the hospital to confirm the details.

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## WHY DO I NEED THIS OPERATION?

The most common reasons to have this operation are for problems in the head of the pancreas: cancer of the pancreas, bile duct, duodenum or ampulla. The Whipple's operation offers the only chance of cure for many of these problems.

There are also many non-cancerous conditions that are treated with this procedure: e.g. cysts of the head of the pancreas and bile duct, pancreatitis, pre-cancerous tumours, trauma and rarely for gallstones lodged in the head of the pancreas.

It is often difficult to obtain an absolute diagnosis of cancer either before or during the surgery. Cancers in this area are often right in the middle of the pancreas and are not easily or safely biopsied. The pancreas also tends to develop a great deal of scarring or reaction that interferes with interpreting a pre-operative needle biopsy. It is common to biopsy a cancer in this region and obtain a benign result. It is up to the surgeon's judgment to decide whether or not a patient would benefit from a Whipple's Procedure.

The presence of cancer in the piece of tissue removed is determined by the pathologist when they look under the microscope. A result from the pathologist can take anywhere from 2 – 7 days after the operation. Occasionally what might look like a cancer on all the pre-operative tests will turn out to be benign in the final pathology. This should be considered to be good news.

The decision to proceed to this type of surgery is very complicated. This is the reason that it is important to be operated on by a surgeon with a great deal of experience in surgery for cancer of the pancreas and bile duct. His/her judgment will be valuable in determining whether or not a tumour is present and if it is removable.

Sadly, it may not be possible to remove the cancer during the surgery. This might be because of a finding of secondary cancer in the liver. Sometimes this is not visible on scans before the operation. Another reason may be the cancer's relationship to important blood vessels supplying the liver and bowel. These blood vessels cannot be removed without a threat to your life. If the cancer is not removable, we may elect to perform a biliary bypass procedure to permanently drain away the bile duct and prevent jaundice. If the cancer is not removable, unfortunately there is no chance of cure. This will be discussed fully with you and your family after the surgery.

## WHAT DOES THE PANCREAS DO?

The pancreas has two purposes.

1. It produces insulin to prevent diabetes.
2. It produces digestive juices to help your body absorb food.

It is a long, soft, yellow organ shaped roughly like a fish. It has a head, neck, body and tail. It is in the upper abdomen and runs from one side to the other. The head is on the right just underneath the liver. The lower end of the bile duct runs through the head of the pancreas. The first part of the small bowel called the duodenum is attached to the head of the pancreas. The tail of the pancreas is intimately related to the spleen.

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## HOW DO I KNOW I HAVE A PROBLEM WITH MY PANCREAS?

1. Jaundice: Pancreatic cancer frequently blocks the bile duct that carries bile from the liver to the bowel. This results in the development of jaundice or yellowness in the whites of the eyes. This may be accompanied by:

- severe itch that might come before the jaundice
- dark urine – like tea
- pale or white bowel movements
- fever or shivers and shakes

Jaundice occurs when there is a blockage of the bile duct and bile cannot flow out of the liver. The bile is then forced into the bloodstream and this gives the characteristic yellow colour of the skin. Bile is very important in the bowel to help absorb fat.

2. There may be a new onset of diabetes.

3. Pain is unusual and often only occurs when cancer is advanced.

4. No symptoms at all. Many times a problem with the pancreas is found during a scan for another reason and there are no symptoms at all.

## WHAT TESTS MIGHT I HAVE BEFORE AN OPERATION IS CONSIDERED?

Planning for Whipple's procedure requires a number of tests. These can usually be completed within a week. There are many investigations, both invasive and non-invasive that must be performed before any decision can be made regarding an attempt at curative surgery. After each test, the situation is reassessed. The decision not to offer an operation can occur after any or all of these tests. The final decision about feasibility of surgery is made at the actual time of the operation. You will be included in the decision making up to this point.

You must be medically and physically fit to undergo an operation of this caliber. Generally we are reluctant to perform it in people over 80 years of age because even if you are healthy you may not have enough reserve to recover from this surgery and its complications.

Some of the tests you can expect to have may include but are not limited to:

### 1. Blood Tests

Full blood count, Kidney and Liver function tests.

Tumour markers (Ca19.9): it is important to remember, blood tests for cancer are not helpful in some people. They can be normal in 30% of patients. They are used only as a guide and not for diagnosis. These tests can be elevated in anyone with jaundice even if they don't have cancer.

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## 2. CT scan of the chest and abdomen

Scan performed to look for cancer outside the pancreas or bile ducts i.e. distant spread to the lungs or liver. It also gives vital planning information about the arteries and veins around the pancreas and their relationship or involvement with the tumour. In order to perform successful, curative surgery, there must be no cancer present distant to the pancreas.

## 3. Endoscopic Ultrasound – EUS

This is done under a light anaesthetic by a skilled gastroenterologist. A flexible telescope with an ultrasound mounted in the head is inserted via the mouth into the stomach. Because the pancreas is behind the stomach an excellent view of the pancreas can be obtained. A fine needle can be inserted into the area of concerns and a biopsy can be taken. This is the most common way to get a biopsy of the pancreas. If the diagnosis is obvious from the CT scan however, this test may not be performed.

## 4. ERCP – Endoscopic Retrograde Cholangiopancreatography

ERCP gives an X-ray picture of the bile duct. It is also used to place a plastic tube in the bile duct to relieve jaundice. This is done under a light anaesthetic by a skilled gastroenterologist. A flexible telescope is inserted via the mouth into the stomach. It is not performed in every patient and has some serious risks including pancreatitis, perforation of the bowel and bleeding.

## 5. Heart and lung tests

Performed to assess your fitness for major surgery. This will depend on your age and other health problems. The tests may be an ultrasound of the heart (Echocardiogram), lung function tests and exercise tests.

## 6. MRI

If there is some doubt about the diagnosis an MRI can sometimes be of benefit.

## 7. Key hole surgery or diagnostic laparoscopy

This is done under general anaesthesia in the operating theatre. A small cut is made in the belly button and the tummy cavity is blown up with gas. A camera is inserted. There may be one or more additional cuts made to move things around. This test is done to look for small lumps of cancer that may have spread around the abdominal cavity. This is relatively common in advanced pancreas cancer and if present, is not curable. This type of advanced cancer is not seen well on scans.

If all these tests prove to be favorable for surgery, we will talk to you about undergoing a Whipple's Procedure.

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## WHAT IS IT LIKE TO BE JAUNDICED?

Jaundice occurs when there is too much bilirubin in the blood. Bilirubin is what makes bile yellow. When the bile duct becomes blocked by cancer, the bile that normally passes into the bowel giving the brown colour to your faeces can no longer get there. Bile under pressure builds up in the liver and spills into the blood stream. This causes the whites of the eyes to turn yellow, the urine to become dark and the bowel motions to turn white. Eventually the skin turns a deep yellow colour. This may occur gradually and it might be noticed at first by a family member.

In some patients, jaundice is accompanied by a terrible itch. You might not be able to sleep. Nothing will take away this itch until the bile duct is unblocked. As soon as this happens, the itch will disappear quite quickly. Try not to scratch because it will cause skin irritation and bleeding. Sometimes calamine lotion helps to sooth the itch. If it is debilitating, a sleeping tablet can help in getting some rest.

When someone is jaundiced, they are usually admitted to the hospital because jaundiced patients can get infections and become dehydrated very easily. Being jaundiced means you will not be able to absorb Vitamin K and your liver will not be able to make the factors required for blood to clot. You may bruise easily.

In the hospital you will be given intravenous fluids and intravenous Vitamin K. Your blood tests will be checked regularly.

Jaundice needs to be fixed within a few weeks of its onset because permanent liver damage will eventually occur. This may be done with a test called an ERCP. (see above)

## WHAT CAN I DO WHILE I AM AT HOME WAITING FOR MY OPERATION?

You may be at home for a short period before your surgery. You may still be mildly jaundiced.

We recommend the following:

- It is best to try and eat healthy, fresh food. A high protein diet is especially good. This means lots of meat, fish, eggs along with fruit and vegetables. If you feel unwell, you may not feel like eating much, so it is important to pay attention to this as though you were training for a marathon.
- Take a simple multivitamin daily (purchased from the chemist or supermarket).
- Drink at least 3 litres of water per day. Being jaundiced is very hard on the kidneys and dehydration may lead to infections and kidney failure.
- Try to avoid hot weather and use the air conditioner in the summer if possible. Hot weather makes dehydration more likely.
- Try and do some light activity each day, like a short walk in the cool of the day.
- Try to decrease your intake of caffeine, because it is really common to have a caffeine withdrawal headache in the days after the operation.

## THINGS YOU NEED TO TELL US ABOUT WHEN YOU ARE AT HOME BEFORE THE OPERATION

Fevers or shivers: this is an infection in the bile ducts and is very common after a stent has been put in the bile duct. You may feel extreme fatigue and headache during one of these infections. If it happens you must call us or if you are out of town, go to your nearest emergency department. It is likely you will need to be admitted to the hospital and given intravenous antibiotics. The stent in the bile duct may need to be changed.

## THE WHIPPLE'S OPERATION

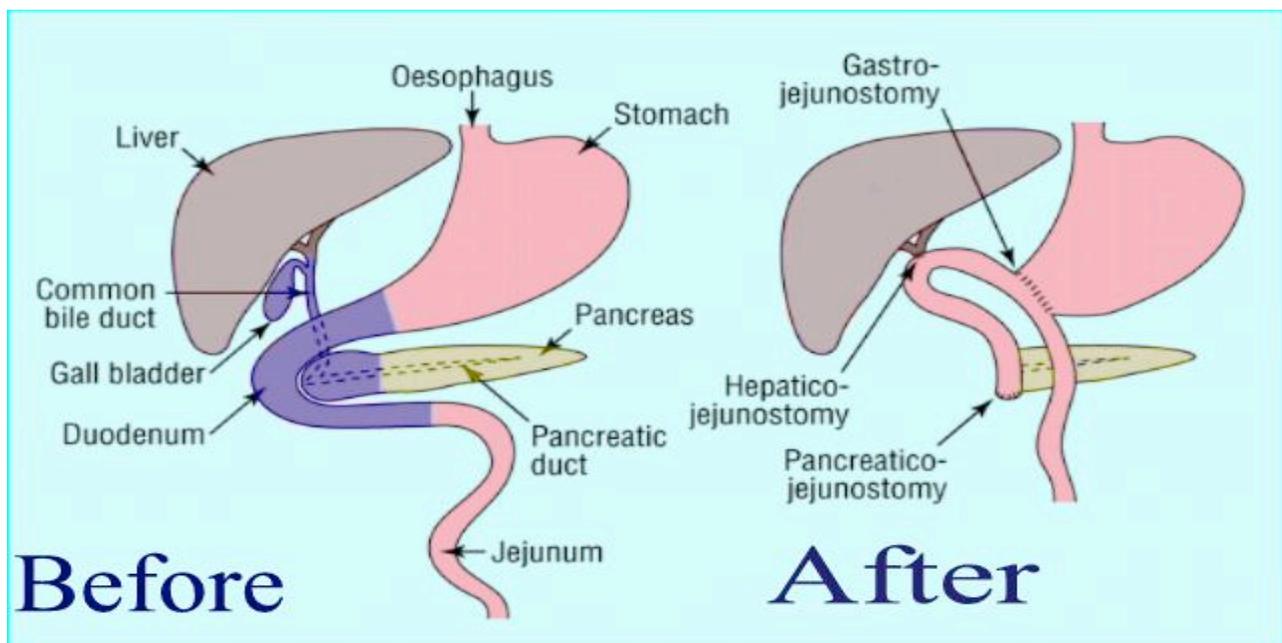
The Whipple's procedure is a major operation and is performed in two stages:

### 1. Removal stage

The gall bladder, the common bile duct, the head of the pancreas, duodenum, part of the stomach, part of the small bowel and the lymph glands in the area are removed. Everything that is shaded blue in the picture is removed.

### 2. Reconstruction stage

The pancreas is attached to small bowel, the bile duct joined to the bowel and finally the stomach is joined to the bowel to allow food to pass through. This surgery takes between 4-8 hours.



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## WHAT TO EXPECT IMMEDIATELY AFTER SURGERY

### Pain Relief

In the first few days after surgery there may be a moderate amount of discomfort. All efforts will be made to ensure you are not in terrible pain, but you will have a number of tubes you are attached to that will make things reasonably uncomfortable.

You will have some form of pain relief. There will usually be a choice of:

- Epidural (if medically suitable) – this is a fine tube placed in the back that delivers local anaesthetic to the nerves around the spinal cord. It is highly effective and you will still be able to walk with it in. There are small risks associated with its use and your anaesthetist will discuss this with you at length. The epidural will be in place for three to four days after surgery and you will be able to stand up and walk while it is in.
- Patient Controlled Analgesia (PCA) and a “Pain buster” - a button you will press that results in strong pain killers (like morphine) running straight into your IV line. This is combined with a tiny catheter placed in the wound that dispenses local anaesthetic. These devices are very safe and have locking mechanisms to prevent overdose.

IT IS VERY IMPORTANT THAT YOUR RELATIVES DO NOT PUSH THE PAIN BUTTON FOR YOU. THIS WILL RESULT IN AN OVERDOSE OF MEDICATION THAT MAY STOP YOUR BREATHING.

Your anaesthetist will discuss the pros and cons of each with you prior to surgery and it is your choice in conjunction with what your anaesthetist feels is in your best interest. Either option may not be suitable for every person.

Every effort will be made to minimize the discomfort and make it bearable. Your nurses will be monitoring your level of pain frequently. When you are eating, you will be converted to oral pain relief.

### Drain tubes

You will have a number of plastic tubes in your body following the surgery. They will vary a little depending on your particular medical need. They will be removed at variable times following your surgery under our direction. All tubes except for an IV in your hand will be put in under anaesthesia, so you will not be aware of this.

1. IV line: central venous line placed in your neck (done under anaesthesia) to give you fluids and pain relief after surgery.
2. Urinary catheter: tube placed in your bladder so you don't have to get up to pass urine.
3. Arterial line: a fine catheter inserted into the artery of the wrist to monitor the blood pressure.

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4. Abdominal drain tubes: two or three soft plastic drains coming out of your abdomen that are placed around the pancreas to drain any fluid, bile or pancreatic juice, so it does not collect in your abdomen.
  5. Nasogastric tube: all patients require a tube that goes from their nose into their stomach for a variable time after the operation.

### **Intensive Care**

After the operation is finished, you will be transferred to intensive care. You may be kept asleep (induced coma) for a short time after the operation. Alternately you may be woken up straight away. There are many factors that go into making this decision and your family will be told whether you will be awake or left asleep. You will spend at least one night in intensive care. When you are stable you will come to the ward.

### **Eating**

You will not have anything to eat or drink for a variable time after surgery. This can be several days. An intravenous infusion will provide you with the necessary fluids. You will have a nasogastric tube (NG) in your nose that will remove the stomach contents until your stomach and intestines recover. We will let you know when you will be able to eat. You will start on liquids first and gradually take solids. If you are unable to eat adequate amounts of food after a short period of time, we will begin feeding you via an IV or a tube in your nose.

You may lose your taste for food. It will return within a few months

It is normal to have a sore throat for a few days after the surgery because of the anaesthetic tube and the nasogastric tube.

People who drink more than two cups of coffee a day may notice a caffeine withdrawal headache and irritability a few days after surgery.

### **Urinating/Bowel Movements**

In the first few days after the surgery, a tube placed in your bladder will drain your urine. As your bowels start to wake up, you will pass excessive amount of urine. This is a good sign. You will probably not have a bowel movement until 5-7 days after the surgery. Many patients worry about this, but it is normal. You will pass wind a few days before your bowels work.

### **Activity**

You can expect your nurse and physiotherapist to help you get out of bed right from the first day after surgery. You will be able to walk short distances even with all of the tubes and intravenous lines. As each day passes your tolerance for walking and sitting in a chair will increase. This is extremely important to prevent pneumonia, clots in the legs and loss of general condition.

### **Other Medications and Preventative Measures**

You will be given a blood thinner once or twice a day as a small injection under the skin. This helps to prevent clots in the legs (DVT) that may travel to the lungs and be life-

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threatening. If you are in a high risk group for DVT, you may be sent home with this injection for several weeks after surgery. You or a family member will be taught how to give the injections. You will be asked to wear TED stockings throughout your hospital stay. These prevent clots in the legs. You may stop wearing these when you are able to get up and walk easily by yourself.

You may be given a medication called Octreotide for about 5 days after the surgery. This is an injection given three times a day under the skin. It helps to dry up pancreatic secretions and may have a role to play in reducing pancreatic leak.

You will be given an antibiotic tablet called Erythromycin three times a day. This tablet has the curious ability to increase the propulsion of the stomach and may help to stop vomiting. This medication will stop when you are eating well.

In most instances you will be given a medication to decrease the acid secretions in the stomach. This prevents stomach ulcers that may occur after major surgery. This will continue life long.

You must not smoke at all.

### **Your Incision**

You can expect to have a waterproof dressing over your incision for the first 5 days. I will remove the dressing. You will be able to shower with the waterproof dressing on. It is quite common to have a small amount of leakage from the wound.

Usually there will not be any stitches to remove, they will dissolve.

### **Other Important Information**

You can expect to see your primary surgeon every day. On weekends or in times when I am operating elsewhere, you will see one of the practice partners. All of us are very experienced in this type of surgery and usually assist each other in the operating theatre.

We will make every effort to keep you informed of your progress. We are always honest and open with you and your family. Feel free to ask questions.

### **Length of Stay in Hospital**

On average, most patients will expect a 2 – 3 week hospital stay. This differs greatly for individual patients. Some stay shorter, some stay much, much longer. You will not be discharged before you can walk unaided and care for yourself and eat enough to maintain nutrition.

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## WHAT ARE THE COMPLICATIONS THAT MAY HAPPEN IMMEDIATELY AFTER A WHIPPLE'S OPERATION?

The Whipple's operation is a complex surgery with many potential complications. In the hands of surgeons who are experienced, the complication rate is usually very low.

The most serious and specific complications that may be seen after this operation include:

### Pancreatic Fistula

After the tumour is removed from the pancreas, the cut end of the pancreas is stitched onto the bowel so that pancreatic juices can mix with food to allow absorption. The pancreas is a very soft and sometimes fatty organ. In some patients, this stitching may not heal very well. If this happens, then pancreatic juice may leak freely into the abdomen. A significant pancreatic leak occurs in about 10% of patients.

This leak may be controlled by the soft plastic drain inserted at the time of the surgery and no further intervention will be required. As long as the leak is controlled, it will eventually stop. Sometimes, the drains do not do a good enough job and a new drain needs to be placed in the X-ray department.

Occasionally the leak cannot be drained by these methods and the patient will need to be re-operated on to drain the pancreatic juice. This re-operation occurs in 1 – 4% of patients undergoing the Whipple's procedure. If this happens, the patient is usually critically ill. Sometimes the best treatment of pancreatic leak is to remove the rest of the pancreas. This is done if the leak is a threat to the person's life. This will mean insulin dependent diabetes is a certainty.

### Gastroparesis – paralysis of the stomach

It is quite common (about 25% of patients) for the stomach to remain paralyzed for a variable time after a Whipple's operation. The small bowel however, begins to function in the first 1 – 2 days after surgery.

It may take up to **4 – 6 weeks** for the stomach to adapt to the changes after the surgery. This means that you may not be able to take anything by mouth during this time and you will have to remain in the hospital. It may also mean that you may require continuous drainage of your stomach to prevent vomiting. (Done with a tube in the nose or a tube through the skin of your abdomen into your stomach).

I give all my patients an antibiotic called Erythromycin. This sometimes works as a stimulant for the stomach. In some people it reduces the risk of the stomach not working by 20%.

If you experience a prolonged period of time where your stomach does not work, it can be a very difficult time for you and your family emotionally. It is easy to lose spirit and feel quite "down". Rest assured, the stomach will start working again in its own time and when this occurs it usually does so rapidly and you will go home shortly after.

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## **Other immediate complications of this surgery**

Like all major surgery there are a number of serious complications that may occur. These must be dealt with on a case by case basis. Some of these complications are:

- Death from any cause: approximately 1% (1/100) of all patients having this type of operation.
- Bleeding: either in the first 1 – 3 days requiring return to surgery or delayed bleeding from a ruptured artery some weeks after surgery. You may require a blood transfusion (approximately 20% of patients having this surgery).
- Damage to the artery that supplies blood to the bowel during the operation. This is usually fatal.
- Other blood vessel problems: heart attack or stroke that may be fatal.
- Damage to the hand from the arterial line.
- Development of diabetes requiring insulin injections.
- Infections: wound, pneumonia, urine, bile duct, intra-abdominal, epidural related, IV line related, related to the gastrostomy tube.
- Paralysis secondary to a bleed or infection around the epidural.
- Punctured lung secondary to the IV line in your neck.
- Clots in the legs that may travel to the lungs.
- Stomach ulcers that may bleed. This can present as a vomit of blood or black bowel motions.
- Urinary catheter complications: unable to pass urine after the catheter is removed especially in men.
- Permanent or temporary damage to nerves in the arms, legs and neck due to prolonged immobilization of the operating table. This may result in loss of feeling or movement.
- Wound pain and prolonged numbness under the wound.
- Hernia through the wound or internal organs.
- Bowel obstruction secondary to scar tissue. This risk is life-long and may require further surgery.

## **AFTER YOU GO HOME**

### **What are the long-term complications of the Whipple's operation?**

Generally within six months of this operation, life will resume some semblance of normalcy. The majority of Whipple's patients will return to a normal and active life. Some of the long-term consequences of the Whipple's operation include the following:

#### **Malabsorption**

The pancreas produces a substance (enzyme) that digests food. In some patients, removal of part of the pancreas during the Whipple's operation can lead to a decreased production of this enzyme. Patients complain of diarrhoea that is very oily and is difficult to flush away. The solution is to take oral pancreatic enzyme pills (Creon) and this usually provides excellent relief from this problem. About 20% of all Whipple's patients may require these supplements.

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## **Diabetes**

The pancreas' other role is to produce insulin and control blood sugar levels. During the Whipple's operation the head of the pancreas is removed, leaving less insulin producing cells. Therefore, there is a risk of developing diabetes.

In general, patients who are diabetic before surgery or who have an abnormal blood sugar level controlled with a low sugar diet prior to surgery, have a high chance of their diabetes becoming worse. On the other hand, patients who have completely normal blood sugar prior to surgery with no history of diabetes and do not have chronic pancreatitis or morbid obesity, have quite a low probability of developing diabetes after the Whipple's operation.

## **Alteration in diet**

After a Whipple's operation there is a significant change in the amount of food people can eat. Because the stomach is a little smaller and because the propulsion of the stomach is affected, it is easy to feel full very quickly and not take in enough calories. This is part of the reason for the weight loss experienced after this operation. It is also very common to have an occasional vomit at home. If the vomiting occurs every day after discharge, this is not normal and should be reported.

I generally recommend that the patients eat smaller meals and snack between meals to allow better absorption of the food and to minimize symptoms of bloating or fullness. This means eating small amounts of food 6-8 times per day.

I also recommend the use of high calorie drinks like Ensure, Sustagen or Resource. They are a relatively low volume and pack in a lot of calories.

It is also a good idea to take an inexpensive over the counter multivitamin each day leading up to and after the operation.

If you experience diarrhoea, you should let me know as this can be a sign that the body needs pancreas supplements. This irritating problem is very treatable.

## **Loss of weight**

It is common for patients to lose up to 5 to 10% of their body weight after this surgery. The weight loss usually stabilizes within a month or two of surgery and most patients will regain this weight in the six months after surgery.

## **Attacks of pancreatitis**

Some Whipple's patients may get recurrent attacks of inflammation of the pancreas. This is a difficult problem to treat and will result in attacks of abdominal pain.

## **Narrowing of the bile duct**

Patient's having a Whipple's operation may develop a narrowing of their bile duct. This will usually occur in the first year and may present as altered blood tests, jaundice or fever. It will need further surgery to correct the problem.

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## Can I drink alcohol?

Alcohol is very toxic to the pancreas in some people. After pancreas surgery, alcohol should be avoided for at least three months. Beyond that, we would recommend no more than an occasional drink. Some people may get pancreatitis with even one glass.

## How you may feel

You will feel weak or "washed out" when you go home. You might want to nap frequently. Even simple tasks may exhaust you. It is likely you will lose the taste for food for several weeks. You might have trouble concentrating or difficulty sleeping. You might feel depressed.

**These feelings are usually transient and can be expected to resolve but they may last many months after this tremendously arduous operation.**

## Going home

You will not be sent home until you are walking unaided and able to care for yourself. You may need to have help at home preparing meals and cleaning because you will be tired for many months. Some people need to go to a rehabilitation unit for a period of time after this surgery. This is a time to rely heavily on family and friends and it is a good idea to have someone at home with you for the first week or two.

## Your medications

I will discuss with you which medications you should take at home. If needed, you will be discharged with a prescription for pain medicine to take by mouth. You can expect to go home with a stomach medication to prevent ulcers and you might have to take this life long.

## Your incision

It is common to have discomfort, pulling and numbness of the wound for many months after the operation. It becomes more pronounced about a month after surgery. It is not agonising, but it can be annoying if you don't understand that it is normal. These feelings go away with time. It takes a full year for a wound of this nature to settle completely.

Your dressing will be removed before you leave the hospital and if it is not leaking it will be left open to the air. You may wear clothes over the top of it.

It is very common to have a small or even large leakage of clear fluid from one of the drain sites, several days or weeks after the operation. If this occurs at home, do not panic. Put a pad over the leaking area and call the surgery the next day for advice.

It is very common to have a prickly end of a stitch poking out of the wound. This happens as the stitches dissolve. If it bothers you, you may snip it off with a pair of scissors. Otherwise it will disappear about 8 weeks after the surgery. If you are very thin, you may be able to feel the deep stitches that are not dissolvable if you push hard along your wound with your finger. If this bothers you, it is relatively easy to remove the offending stitch several months after the operation.

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Your incision may be slightly red along the cut. This is normal. You may gently wash dried material around your incision and let water run over it. Pat the wound dry with a towel. Do not rub soap or moisturizer into your incision for at least 4 weeks or until it is fully healed. After this you may rub vitamin E cream along the wound.

It is normal to feel a ridge along the incision. This will go away. It is normal to have a patch of numbness under the wound. Over the next few months your incision will fade and become less prominent.

### **Passing drain tubes in the bowel motion**

During surgery, we may place several soft pieces of plastic tubing to hold open your bile duct and pancreatic duct. These may pass with your bowel motion at any time after your surgery. It is usual not to notice them. If you do see them in the toilet, it is completely normal. DO NOT retrieve them from the toilet bowl and you DO NOT have to call and let us know they have passed. When these tubes are still inside you they will be seen on an X-ray. It is possible that some tubes remain in the bile and pancreas duct forever. Only rarely do they need removal.

### **Activity**

Listen to your body, if it is hurting, don't continue with the activity.

Do not drive until you have stopped taking narcotic pain medication and feel you could respond in an emergency.

You may climb stairs.

You may go outside, but avoid travelling long distances until you see us at your next visit.

If you need to fly home after the surgery, you will need a travel clearance.

Do not lift more than 10 kg for 6 weeks. (This is about the weight of a briefcase or a bag of groceries). This also applies to lifting children, but they may sit on your lap.

You may start some light exercise when you feel comfortable.

You may swim after 4 weeks.

Heavy exercise may be started after 6 weeks - but use common sense and go slowly at first.

You may resume sexual activity when you feel ready.

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## WHAT SHOULD I BE AWARE OF IN THE DAYS BEFORE MY OPERATION?

### Hospital

The hospital will call you the day before your operation to confirm your admission time. They will also let you know about any hospital excess you may have to pay. It is common to be admitted the night before this operation. You will usually meet the anaesthetist at this time to discuss your anaesthetic and post-operative pain relief.

### Fasting

You must have nothing to eat or drink for six hours prior to surgery. You may take sips of water up until 2 hours before the operation and you may take your usual medications with a sip of water.

### Medications

- If you are on blood thinners such as Aspirin, Warfarin, Plavix, Iscover, Clopidogrel, Pradaxa, Dabigatran, Rivaroxaban or anti-inflammatory drugs (Brufen, Mobic, Voltaren, etc), they can cause bleeding during surgery. We will advise you about what to do with these drugs prior to surgery. You must let us know about these drugs and the decision to stop them is based on each individual patient's needs.
- Diabetic medications: we will give you advice on whether to take your diabetic medications on the morning of surgery or not. Some diabetics will be admitted the night before the operation.
- If you are on Prednisone, you should not stop this drug suddenly.
- Cholesterol lowering medication should not be taken when you are fasting.
- If you are taking any alternative medications e.g. St John's Wort, fish oil or garlic, you should stop these tablets one week before surgery as they may result in excess bleeding.
- You may continue to take a multivitamin.
- Continue to take all other medications, even on the morning of surgery with a small sip of water.

### Income Protection Insurance and Centre link

If you have this insurance, start doing the paperwork required to claim before the operation. Centre link claims take many weeks to process. It is difficult to recover well when you are worried about finances. Before any major surgery it is wise to get your affairs in order including an Advance Health Directive, Will and Power of Attorney.

### Queensland Cancer Council

Call the Queensland Cancer Council 13 11 20 as they have a number of general support financial assistance programs in place if needed.

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## **Family**

This is the time to rely on family and friends for support. If you receive offers of home cooked meals and household help, accept them happily. That way you can concentrate on getting better.

## **Other things to know**

- You must bring all relevant x-rays to the hospital with you.
- If you smoke, it is in your best interests to stop completely as soon as you can. See your GP for alternatives or call Quitline (131 848) if you wish to seek advice.
- You should also abstain from drinking alcohol 24 hours prior to any surgery.
- Bring all your current medications with you to the hospital.
- You will be wearing hospital gowns for the first few days, but bring comfortable pyjamas, personal toiletries, small change for newspapers etc.
- Do not bring large amounts of cash or valuables.

## **WHAT WILL THIS SURGERY COST ME?**

We largely work as 'no-gap' doctors. This means that the surgeon fee for your operation will be sent to your health fund and there will be no 'gap' or extra amount of money to pay. There are always exceptions and decisions regarding this are made on a case-by-case basis.

If you do not have private health insurance or if you have overseas insurance, you will be given a quotation for surgeon, assistant, anaesthetic and hospital fees and must pay in full prior to the operation.

This surgery is technically demanding. We are usually assisted by another consultant surgeon from the group. The remuneration for the assistant is very low for the expertise required and as a consequence there may be an out-of-pocket charge for the assistant.

If your Body Mass Index is >35, i.e. you are morbidly obese, the surgery is far more difficult and the risks of complications including pancreatic leak and death is higher. If it is medically suitable, I may recommend a period of weight loss with a program called INTENSIV (<http://www.intensivweightloss.com/>) before contemplation of this operation so it can be done more safely. This will incur an extra out of pocket expense.

Outpatient consultations are not covered by the health funds and there will be a charge for these meetings. You will get a proportion of this money back from Medicare. There is no fee to be paid for the first post-operative outpatient visit.

There may be other out-of-pocket fees from your anaesthetist and any other specialists who are asked to look after you. Many of them will also be no-gap doctors but this cannot be guaranteed. You should ask them ahead of time any out-of-pocket costs. Ask us who will be performing your anaesthetic and you can make enquiries with them about any expenses.

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We use a drug after your surgery called Octreotide to slow down the juices made by the pancreas. It incurs an out-of-pocket cost of \$300 - \$400. We feel that this decreases the risk of pancreatic leak. Please let us know if you do not want us to use this drug.

There may be extra costs for x-ray, pharmacy and pathology. Intensive Care is usually billed straight to your health fund with no more to pay.

**You have a right to gain 'Informed Financial Consent'. Fees from other practitioners are beyond our control and you should ask for the costs from each person who is asked to look after you. Patient's have a choice when it comes to paying for their health care and you are fully within your rights to negotiate and shop around.**

If you do not live in Brisbane, you will be responsible for all accommodation, hotel, meal and transport costs for you and your family. There is some monetary assistance available for private patients through the Patient Travel Subsidy Scheme (PTSS) providing assistance to patients and in some cases their carers, to enable them to access specialist medical services that are not available locally. Please see Queensland Health's Patient Travel Subsidy Scheme site for details. <http://www.health.qld.gov.au/iptu/html/ptss.asp>. Greenslopes Hospital web site has an extensive list of hotels available in the local area. <http://www.greenslopesprivate.com.au/For-Visitors/off-site-accommodation.aspx>.

## ABOUT YOUR SURGEON

### **Dr Kellee Slater** MBBS (Hons) FRACS

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|----------------|---|
| 2006 – Present | Staff Surgeon<br>Hepatopancreatic-Biliary-Liver Transplant<br>Princess Alexandra Hospital and<br>Greenslopes Private Hospital<br>Brisbane, Queensland |
| 2004 – 2006    | Hepatobiliary and Liver Transplant Fellowship<br>Princess Alexandra Hospital<br>Brisbane, Queensland  |
| 2002 – 2004    | Liver and Kidney Transplant Fellowship<br>University of Colorado Hospital<br>Denver, Colorado, United States of America                               |
| 2002           | Fellow of the Royal Australian College of Surgeons (FRACS)<br>General Surgery   |
| 1989 – 1994    | MBBS (Honours)<br>University of Queensland  |