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Te Whatu Ora

Health New Zealand

Waitematā

Gastrectomy Surgery (Partial/Total)

A Guide for Patients and Whānau

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Introduction

Welcome to North Shore Hospital

Coming into hospital may be a new experience for you. Understanding what happens during your stay will make your experience more pleasant and help with your recovery.

This booklet is for patients who are having a gastrectomy surgery. It aims to support what has been explained to you about getting ready to come to hospital, your hospital stay, operation and recovery afterwards. It is important to remember that, because people are all different, this booklet cannot replace the information given to you by your specialist.

There may be words or phrases in this booklet that you do not clearly understand. Please ask your doctor or nurse to explain anything you are not sure about.

The staff at North Shore Hospital aim to make your stay in hospital safe and comfortable. Please don't hesitate to contact us if you have any queries regarding this information and your operation.

The Gastrectomy Operation

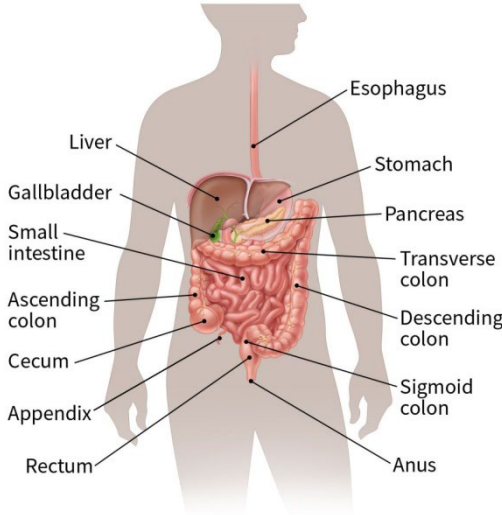
A gastrectomy is a surgery to remove a part or all of the stomach.

As with all operations, there are risks and possible complications. It is important that you discuss with your surgeon how these risks relate to you.

The Stomach

The stomach is part of the digestive system. It is a J-shaped organ, which sits in the upper left part of the abdomen between the oesophagus and the beginning of the small bowel. It helps digest food. Strong acids, enzymes, and the stomach muscles help churn and break down the food. The food then passes into the rest of the intestine, where it is further processed so your body can take out important nutrients and water.

Most people with stomach cancer are diagnosed after a gastroscopy (endoscopy) to investigate their heartburn, reflux, or melena. Gastric cancer can affect the stomach and the areas around it.



The Operation for Stomach Cancer

The operation for stomach cancer is called a Gastrectomy. This surgery is done in the upper abdomen.

A Gastrectomy can be done in different ways. Your surgeon will discuss with you about which option is right for you. Depending on what surgery you have, your surgeon will make 1 or more incisions (surgical cuts) on your belly.

- When 1 long incision is made, it's called an open surgery. Some or all of your stomach is removed through this incision.
- When several small incisions are made, it's called laparoscopic surgery. Small surgical instruments and a laparoscope (a tube-like instrument with a camera) are put into the incisions to remove the part of your stomach that has the cancer. This surgery is less invasive.



Laparoscopic Port Sites

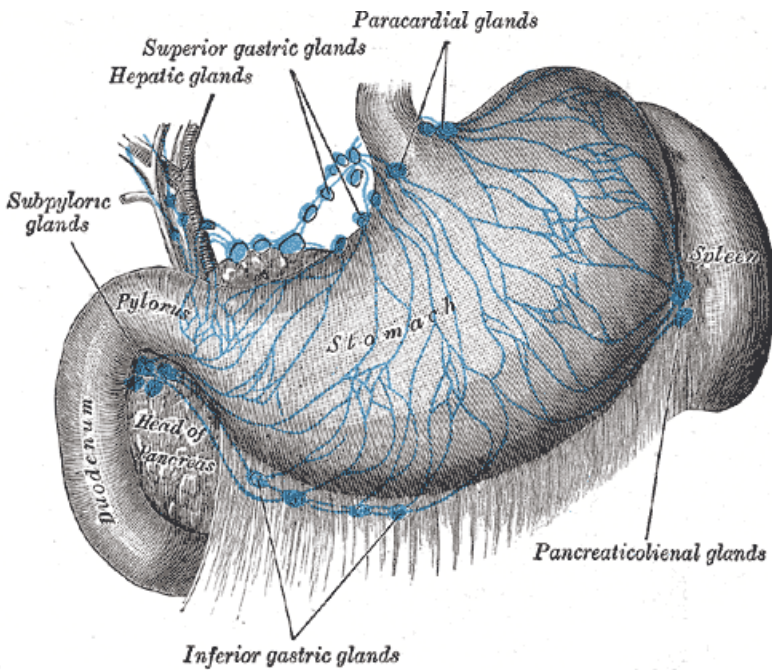


Open Incision

Exact location and number of port sites may vary according to the procedure and surgeon.

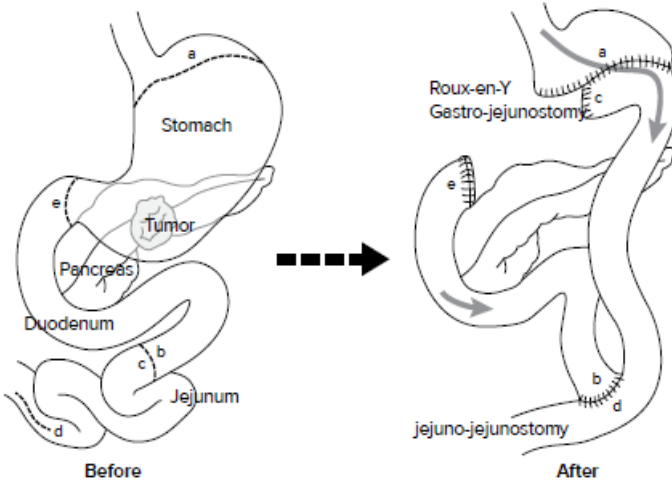
The entire operation could take from 1 to several hours depending on the complexity. Hospital stay will vary, but may be less than a week if all goes straightforward, or more than a week.

During your operation, the surgeon will also remove some of the lymph nodes from around your stomach. Lymph nodes, or lymph glands, are small sacs that are scattered throughout your body. You may be aware of these in the throat or under the arms when they become enlarged, due to a sore throat or viral infection. Lymph nodes filter the fluid that has left the blood and is moving between the cells. Before this fluid returns to the blood stream the lymph nodes remove impurities and infection. Because they are a filter system, they are also an early place for cancer cells to lodge in and grow.

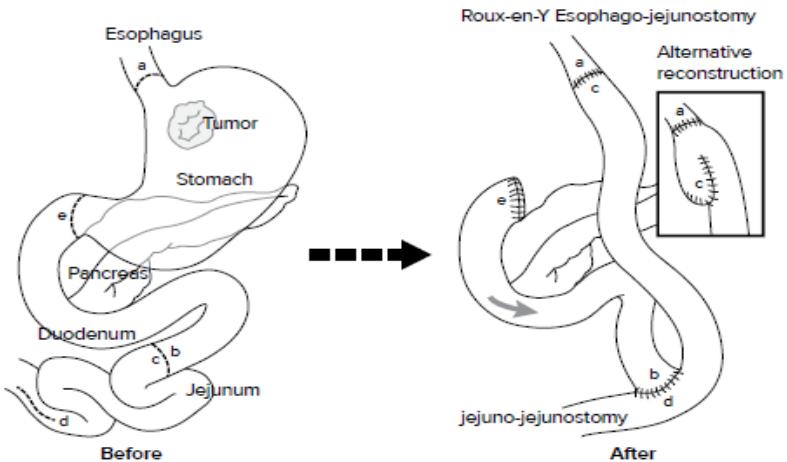


There are two common types of Gastrectomy:

Subtotal or partial gastrectomy - The cancerous part of the stomach is removed, along with nearby fatty tissue, lymph nodes, and part of the small bowel, if necessary. The top part of the stomach and oesophagus is usually left. A loop of bowel is joined to the stomach for food to pass out.



Total gastrectomy - The whole stomach is removed along with nearby fatty tissue, lymph nodes, and parts of the nearby organs (if required). The join is called an anastomosis.




Preparing for Your Hospital Stay

It is important to begin planning how you will manage after you are discharged home.

- You will need to have someone stay with you or organize to stay with family/whānau or a friend for a time after you are discharged. You will tire more easily for a while after you go home and won't be able to do things with the same energy as before.
- If you do need help after discharge, you will be seen by the Needs Assessment Team in hospital about help with personal cares at home.
- With a community services card, you may also qualify for home help.
- If you have any social or emotional concerns, please contact your clinical nurse specialist to discuss this further so they can refer you to someone who can help support you during this time.

The following list may help you to prepare for your operation:

- Arrange for someone to bring you to hospital. Please let your nurse or nurse specialist know if you need assistance with transport to hospital.
- Consider getting a medical alarm for a short period of time if you are living alone.
- If you are on your own, decide if you need to apply for a sickness benefit or other benefit.
- If you usually do your own lawns and gardens, you may want to arrange to have these managed by someone else for a couple of months.
- If you usually manage your own housework you should arrange to have this managed by someone else until you feel well enough.
- If you have children/dependents and/or pets, you should organise care and /or feeding for them.
- Check that your house security is in place, cancel paper delivery and organise for your letterbox to be cleared if needed.

- 
- You may wish to ask your provider to put some of your household services, such as newspaper delivery, on hold.
 - Make a list of useful contact numbers.
 - Consider your needs for when you return home (eg supplies, transport, housework, support). Family/whanau and friends may be able to help.
 - If you usually manage your own meals, you might consider freezing some for when you return home or purchasing some pre frozen.

Before Your Operation

Nutrition

Good nutrition is important prior to an operation and will help you cope better with the recovery. You will be seen by a dietitian who will provide you with dietary advice. Patients with stomach cancer may also need an additional liquid food supplement.

You may be given a prescription for an extra nutritional drink to be taken three times a day for five days prior to your operation. This aims to reduce the chances of some post-operative infections. This is free of charge but can only be collected from the outpatients' pharmacy on the ground floor of North Shore Hospital.

Activity

It is important to maintain as much normal physical activity as you can before your operation. Aim for 30 minutes of moderate intensity exercises five days of the week (cycling, walking or swimming). Regular exercise is recommended to keep your heart and lungs healthy.

Smoking

If you are a smoker, it is important for you to stop smoking as soon as you know you are having an operation. Stopping smoking now will reduce the risks during and after the operation and help you heal faster.

Support to stop smoking is available through the hospital by calling the **ELECT Team** on 486 8920 extn 42117 or 021 509 251

Alternatively you can ask a nurse to refer you or send an e-mail directly to elect@waitematadhb.govt.nz

Upper Gastrointestinal (Upper GI) Clinic

Before your operation you will have an appointment in the Upper Gastrointestinal (Upper GI) Clinic where you will be seen by the team of clinicians. Each clinician will explain and discuss with you the various aspects of the operation and recovery and what to expect. Please ask as many questions as you like at this appointment. We encourage you to also bring a support person.

It is a good idea to write your questions down as you think of them and bring them with you to appointments. If you think of questions later, your clinical nurse specialist can answer them for you or ask a doctor to talk with you.

The team of people who will see you in the Upper GI clinic includes:

Surgeon

The surgeons will give you information about your cancer, the operation, and its benefits and possible risks. They will explain to you what to expect afterwards for your immediate and longer-term recovery. The surgeons will also explain what the possible long-term effects of the operation might be.

Anaesthetist

The anaesthetists are the doctors who look after you during and immediately after your operation. Throughout the operation, the anaesthetist will keep you asleep, monitor your heart, blood pressure, oxygen and breathing, making sure you are as safe as possible.

Before you see the anaesthetist, you will have an electrocardiogram or ECG which traces your heart rhythm. You will then meet the anaesthetist who will assess your current health, discuss your past medical history and assess your fitness to have a major operation. They may arrange blood tests or other investigations, or arrange for you to see other specialist doctors, to make sure you are well enough to proceed with the operation. They will discuss with you the plan for the anaesthetic and introduce the options available to provide pain relief after the operation. They will also tell you which of your usual medications to take and which of your medications you need to stop prior to your operation.

Intensive Care Medicine Specialist

The Intensive Care Specialists look after patients in the High Dependency Unit (HDU) and the Intensive Care Unit (ICU). It is not routine for patients to go to ICU/HDU after surgery, although sometimes this is required if an unexpected event or complication arises during surgery that requires close observation. The ICU/HDU team will care for you, along with your surgical team, during the first few days after your operation.

Dietitian

As well as the clinic dietitian who will help you with your diet before coming in for your operation, the dietitian in the ward will help you as you start drinking and eating again.

Clinical Nurse Specialist (CNS)

The CNS coordinates your care, provides support to you and your family/whānau, and ensures you have the information you need about your illness, treatments, hospital stay and post-operative recovery expectations.

The CNS will also provide you with information about other services and professionals in the hospital and in the community.

Other people who may be involved in your care at different time points include:

Psychologist

Psychologists can help you adjust with being diagnosed with cancer and the impact that this may have on you and your family/whānau.

Psychologists can help with:

- making sense of what is happening
- preparing for and making decisions about treatment
- coping with feelings such as anxiety, fear, low mood or distress
- the impact on relationships
- coping with side effects such as pain, treatment side effects and fatigue

Talk to your clinical nurse specialist if you would like to be referred to this service.

Physiotherapist

A Physiotherapist will teach you deep breathing and circulatory exercises and will assist you with your mobility after your operation. This is important to help reduce the risk of post-operative complications, such as blood clots and lung infections.

Social Worker

Social workers can assist you and your family/whānau to deal with personal, emotional, relationship and social problems that are health related. Social workers also provide supportive counselling and referral to services in the community.

The Needs Assessment Service (NASC)

The needs assessor can discuss whether you need any help with personal cares at home. NASC services include:

- Coordinating short/long term supports in the community.
- Facilitating options for support including:
 - Personal care assistance (e.g. - showering, dressing, meal preparation).
 - Household management (e.g. - shopping, cleaning, laundry (requires a Community Services Card)).
- Provision of community support services information (e.g. - Salvation Army Volunteer Services and Age Concern).

During Your Hospital Stay

After the operation you will be cared for in the surgical ward. The surgical team will visit you each morning. This is an opportunity to discuss any aspect of your care and ask any questions that you may have. Every effort is made to preserve your dignity and privacy during the morning ward round. We encourage family/whānau to be present during the ward round.

You will be connected to monitors for your heart's activity, blood pressure and oxygen levels. You will have extra oxygen delivered through either a mask or tubes that are positioned comfortably into your nose.

The intravenous drips and drains will be inserted while you are under anesthetic to deliver fluids and medicines into your blood stream. Your nurse will explain them to you.

Your family/whānau are welcome to phone the unit to ask about your progress. We ask that this please be done through a designated family/whānau member or friend to control the number of telephone calls to staff.

Pain Relief

A combination of pain relief will be used to keep you as comfortable as possible after your operation. This may include:

– Epidural

An epidural is a thin tube inserted in your back by the anesthetist before your operation. Local anesthetic is infused through it to block the nerves that supply the operation site. Not all patients will have an epidural in place but if you do, this will remain in place for up to five days after your operation. You are still able to sit and walk around normally with an epidural in place.

You will be given a button to push so you can control the amount of pain relief you are given. This is called a PCEA (patient-controlled epidural analgesia). The pump is programmed to deliver the correct amount. For a set time after each dose it will not deliver another dose, so it is not possible to overdose.

– Intravenous (IV) pain relief

If needed, pain relief medicines can be given through your IV drip. You may be given a button to push so you can control the amount of pain relief you are given. This is called a PCA (patient-controlled analgesia). Like the epidural, the pump is programmed to deliver the correct amount. For a set time after each dose it will not deliver another dose, so it is not possible to overdose.

– Oral pain relief

When you can drink, you may be given pain relief by mouth (e.g. tablets).

Your pain relief will continually be assessed and managed. It is very important that your pain is controlled. If you are unable to breathe deeply and cough after the operation without it hurting, you could develop a chest infection. Please let the staff know how you are feeling so they can help you.

Nasogastric (NG) Tube

You may have a NG tube in your nose, which goes into your stomach. This drains the stomach contents so that you won't be sick and put strain on your new stomach and wound by vomiting. This tube can make your throat feel sore. It will be removed after a few days and will only be kept in if required.

Urinary catheter

You will have a tube to drain the urine from your bladder. This will be removed once your epidural has been removed and you are able to move to the toilet.

During your stay, your drips and drains will be removed and certain monitoring discontinued. This shows your improving condition and readiness to be assessed for discharge.

Eating and drinking

After the operation the surgical team will review when you can have something to drink. This timeframe could be longer with different surgeries. Once your surgeon is happy that you are healing well, you will be allowed to slowly start drinking and gradually increase to include food. A dietitian will guide you on what to eat while you are returning to normal eating again.

It may take some time for your appetite to return to normal. As part or whole of your stomach will have been removed, you will not have the capacity for food that you previously had. You will need to eat smaller amounts more frequently to prevent discomfort.

Before you go home your dietitian will give you detailed advice about your diet.

Feeding tube

A soft feeding tube might be placed through your abdominal wall into the gut below the operation site. This tube allows the dietitian to provide you with liquid nutrition until you can eat and drink enough on your own. Patients usually go home with this tube in place. Once you are maintaining your weight, it is easily removed in the outpatients' clinic. The ward nurses will teach you how to care for the tube and the district nurse will make sure you are managing well.

Mobility

The physiotherapist and or nurse will aim to get you up into a chair from the first day after your operation. You will then be assisted to walk a short distance with your level of activity increasing as you recover. Walking regularly is important for your recovery and to prevent post-operative complications such as blood clots and lung infections.

Emotions

It is common to feel emotional during your recovery period. When you are feeling down it may help to talk to someone about it, including your family/whānau and close friends, doctor or nurse. It can also help if your family/whānau and close friends understand that it is not unusual for patients to feel down at times after an operation. If you feel overwhelmed, please talk to your doctor or nurse so that they can help you.

Possible Complications of a Gastrectomy Operation

All surgeries and medical procedures have risks and possible complications. A Gastrectomy operation is a major operation. Your surgeon and anesthetist will discuss what the risks and chances of a serious complication are for you. The following are the main complications which could happen. Please ask your doctor if you want more information on the risk (e.g. - the percent/number of people who might experience this).

Anastomotic leak

As part of the surgery, the surgeon will make new joins to the remaining structures after your stomach is removed. These joins are called an anastomosis. Although uncommon, it is possible that the anastomosis may leak. If the doctors are concerned that you may have a leak, a CT scan will be done to check the anastomosis. If you do have a leak you will not be able to eat or drink for the short-term as this may make it worse.

Your surgical team will review the severity of your leak before advising you the plan to manage this. A leak can be treated with antibiotics and drains and in more severe cases, another operation may be necessary to repair a leak. Once the doctors are confident there is no longer a leak you will be able to start drinking.

Chest infection / Pneumonia

Having an abdominal wound can increase the chance of developing a chest infection. It is important that your pain is well managed because pain will prevent you from breathing effectively and moving – both of which are essential to help prevent a chest infection. Please let your physiotherapist, nurse or doctor know if your pain is preventing you from doing your deep breathing and coughing exercises.

Your physiotherapist will teach you the breathing and coughing exercises after your operation, however, we suggest that you take some time now to familiarise yourself with them (please see *Pre-operative Physiotherapy Advice for Abdominal Surgery*).

If you currently smoke, stopping now will help reduce the chance of a chest infection after the operation. **For support contact: ELECT Team** on 486 8920 extn 42117 or 021 509 251

Alternatively you can ask a nurse to refer you or send an e-mail directly to elect@waitematadhb.govt.nz

Wound infection

Any surgical wounds have a chance of becoming infected and great care is taken to prevent this risk. Studies have found that people who stop smoking at least 4 weeks prior to an operation has been shown to reduce wound infection rates by 19% (World Health Organisation, 2020).

Ileus

An ileus is a natural slowing down of your bowels which can occur after a major abdominal surgery. You may feel bloated, nauseated, and may throw up. This usually resolves on its own after a few days. Mobilising can help get your bowel function back to normal after surgery.

Blood clots in the leg

Blood clots can happen in the legs after a major operation and during periods where you are not moving (e.g. after surgery). Symptoms of a blood clot include:

- throbbing or cramping pain, swelling, redness and warmth in a leg or arm
- sudden breathlessness, sharp chest pain (may be worse when you breathe in) and a cough or coughing up blood

To help reduce this risk:

- Your nurse will give you compression stockings to wear
- You may be fitted with disposable leg sleeves which use an air pump to create intermittent compression, or squeezing, around your calves to help with the blood flow.
- You may be started on some blood-thinning medication a day or so after the operation
- You will be helped to get out of bed and move around as soon as possible after the operation

Please also take the time to familiarise yourself with the deep breathing and leg exercises given to you in the *Pre-operative Physiotherapy Advice*

for *Abdominal Surgery* booklet. This booklet is also available in Chinese and Korean.

Potential Longer-Term Consequences of a Gastrectomy Operation

There are also some potential long-term consequences of the gastrectomy operation that you should be aware of.

Dumping syndrome

Dumping syndrome is a rare consequence of the Gastrectomy operation. It occurs when food, especially sugar, moves from the remaining stomach into the small bowel too quickly. The body then releases large amounts of insulin which causes blood sugar levels to drop. This results in nausea, abdominal cramps, sweating, diarrhoea, and dizziness or light-headedness. Dumping symptoms can occur within a short time and up to about 3 hours after eating.

Symptoms can be improved by eating small amounts at regular intervals, reducing the sugar in your diet, eating slowly, and avoiding drinks or liquids during or close to mealtimes. If you experience symptoms of dumping; the dietitian will give you advice on how to manage this.

Gastric retention

Food can also remain in the stomach too long, causing you to feel sick and bloated with burping. This can occur with eating big meals. Major nerves are severed in the operation which causes the problem. You may require medication to help the motility (function) of your stomach. This may be just until your body gets use to the new stomach.

Stricture

In a partial Gastrectomy, strictures are caused by reflux of stomach acid which causes a narrowing in the oesophagus. With a total Gastrectomy, a stricture can happen at the anastomosis join. Strictures are uncommon after surgery but are important to be aware of. You may notice pain and trouble swallowing, or regurgitation of food. Treatment ranges from Proton Pump Inhibitor medication to oesophageal dilation. It is important for you to seek medical advice if you are experiencing these symptoms.

Diarrhoea

You could also experience diarrhea. This is because the vagus nerves that supply the bowel and help coordinate bowel movements are disrupted

during the operation. Medications can help, but diarrhea usually improves over time.

Alteration in diet:

It will take some time to adjust to new eating patterns. Your stomach will be smaller after the operation. You will be advised to eat smaller meals and snack between meals. This is to allow better absorption of the food and to avoid feeling bloated or getting too full.

Loss of weight

It is common for patients to lose some of their body weight following a Gastrectomy operation. This is usually due to not feeling hunger or feeling full after the operation. After an initial weight loss, the weight usually returns to normal in a few weeks. Most patients are then able to increase and maintain their weight. Although people vary, it usually takes a few months to regain the lost weight.

The dietitian will give you advice on healthy eating and building yourself up after the operation.

Vitamin and mineral deficiencies

After surgery, it may be difficult to absorb certain vitamins and minerals which can lead to low levels. Nutrients that may be affected include:

- Vitamin B12
- Iron
- Calcium

If you have had a total Gastrectomy, it is recommended that you take a complete multivitamin daily and have your bloods checked every 3 months until they have returned to normal.

Dietary Advice after Partial/Total Gastrectomy

Some or all of your stomach has been removed. This means you have less space to store food so you are more likely to feel full after eating. Your dietician will discuss with you in more detail after surgery but it is recommended you

- Eat little and often. Aim for 6 or more small meals a day.
- Eat slowly. This way, you will stop eating before you get too full and feel uncomfortable.
- Chew your food well. This makes it easier for your body to digest the food.
- Sit upright during meals.
- Try to make food and drinks as nourishing as you can. Include protein with each meal. Good protein sources include eggs, meat, poultry, fish, nuts, milk, yogurt, cottage cheese, cheese, peanut butter, and tofu.
- Avoid drinking fluid 30mins before and after eating. Drinking with meals can also make you too full.
- You will be at risk of reflux (heartburn). Have your last meal of the day at least 2 hours before bedtime to avoid this.
- Avoid spicy and peppery foods soon after your surgery.
- Avoid fatty and sugary foods if they cause discomfort.
- Try to keep your weight steady.

After You Go Home

You will feel tired and weak for a few months however it is expected that you will continue to feel stronger over this time. Light physical activity and regular walks, several times a day, are encouraged. It is recommended that you gradually increase your activity, taking the time to rest often, until you are back to your normal level of activity. Many patients have reported that it has taken up to a year to feel completely recovered. Sexual activity may be resumed when you feel comfortable to do so.

You may also have times when you are feeling down or worried. If you start to feel concerned about your mood, please either talk with your family doctor, your Cancer Society nurse or clinical nurse specialist. They will be able to refer you for some extra support.

The operation and recovery period can also be a stressful time for both patients and families/whanau. Your family/whanau and support people are also able to contact the Cancer Society for support.

Please avoid lifting anything heavy for at least six weeks after your operation. You may start driving once you are confident that you can brake quickly in an emergency without discomfort. Some pain medicines cause drowsiness and may alter your driving responses. Some insurance companies may not cover you in an accident for up to six weeks following an operation. Please check this with your insurance company and talk with your doctor or pharmacist about the side effects of your medications.

You may notice some numbness and a tingling feeling around your wound. This is because the nerves that are cut during the operation are slow to heal and make the area more sensitive. It can take up to twelve months for this to settle.

After your surgery, the portion of your stomach removed will be reviewed with our pathology team to discuss which stage your cancer is at. Depending on the results, you may need chemotherapy. If you had chemotherapy before surgery, you will likely need chemotherapy again after your operation. Your surgical team will talk with the oncology team at Auckland hospital to discuss your results to decide on your individualised treatment plan.

After you go home, you will continue to be followed up in the outpatients' clinic. At the time of your discharge you will be told when you will be seen in clinic and the booking clerk will send you an appointment letter. Please don't hesitate to contact your Clinical Nurse Specialist (CNS) if you have any questions or concerns between your appointments.

The UGI team wishes you well with your recovery.

Useful Contact Details

North Shore Hospital

(09) 486 8900 or 0800 80 93 42

- Ward 4 extn 42684
- Ward 8 extn 42673
- High Dependency Unit extn 43728

Patient Enquiries

(09) 486 8900 ext 42430

Dietitian / Nutrition service

(09) 486 8900 extn 43556

Maori Health Services - He Kamaka Waiora

(09) 486 8900

Asian Health Support Services

(09) 486 8314 (Direct Dial)

(09) 486 8900 extn 42314/43863

Social Workers

(09) 486 8920 extn 43271

Chaplain

(09) 486 8900 and ask to speak to the Chaplain on call

Support Groups

Cancer Society of New Zealand: Provides a range of free support services for people with cancer and their family/caregivers, including information on cancer and its effects. <https://www.cancer.org.nz/>

- Phone: 0800 226 237
- Email: info@cancersoc.org.nz

Gut Cancer Foundation: Provides information on gut cancers, support, and resources. <https://www.gutcancer.org.nz/>

- Phone: 0800 112 775
- Email: info@gutcancer.org.nz

Look Good, Feel Better: A free program for any person with cancer to gain confidence and attain wellness. <https://lgfb.co.nz/>

No Stomach for Cancer: A global support network for people with gastric cancer.
<https://www.nostomachforcancer.org/>



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Health New Zealand

Waitematā

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