

Help and tips for patients after removal of the stomach (Gastrectomy)

Introduction

This is an edited translation from the German document produced by Das Lebenshaus. It may feel rather a daunting and negative assessment of life after removal of the stomach, but we know a number of patients who have learnt to manage this very well, and continue to lead normal lives. It is probably useful to read this paper in conjunction with the booklet called, "Living after Gastric Surgery for GIST", since the booklet covers things not mentioned here.

How to live without a stomach

The treatment for some cancers involves the removal of the whole stomach, called a total gastrectomy. This can lead to a number of changes in life-style and eating habits. It can also produce side effects which may need medication. This leaflet has information about getting the right foods and taking medicines, suggested by Hermann Mestrom, a German expert in nutrition.

Taking medicines

Tablets and capsules are made so that they release their active ingredients in the best part of the gut so that they can be absorbed properly. Without a stomach, it is usually best to take medicines as a liquid. If there is no liquid form of a drug available, it may be necessary to crush the tablets or open the capsules. If you need to do this, the contents should be ground up or mashed as thoroughly as possible, so that the drug can be absorbed easily. Many medicines taste unpleasant so you may like to mix them with jam, honey or fruit puree.

One particular issue arises with the contraceptive pill. These pills will not work unless they are fully absorbed and with no stomach this is difficult to guarantee. It may be advisable to use another form of contraception.

Problems with swallowing.

Swallowing problems frequently occur after stomach surgery. Food normally passes very quickly into the stomach from the oesophagus. The chewed food is then partly digested before it passes in small amounts into the intestine. The stomach can hold about 2 litres of food and drink. Without a stomach, the food goes into the intestine almost undigested and the intestine will only accept small amounts at a time. This means that you have to eat very slowly. Sometimes the intestine will not accept any more and you may find swallowing difficult. There are drugs that your doctor can prescribe to help to speed up the passage of food. These should usually be taken 20mins before a meal. The body does adapt in time, and the problem will partly resolve itself. This does not mean that you will be able to eat large meals, but it will get easier.

Note: Before you take drugs for this problem, you should be sure that there is no constriction at the junction between the oesophagus and the small intestine, or inflammation of the oesophagus. These can be investigated by X-ray or endoscopy. Discuss this with your doctor

Another possible cause of difficulty in swallowing is that the scar between the oesophagus and the intestine can get tighter after a time. This can be investigated with an endoscopy. If this is the problem, the scar can be stretched

Incomplete digestion

If you have no stomach, a major part of the digestive process is missing, and this often leads to incomplete digestion. To minimize this problem it is often recommended that you take additional pancreatic enzymes such as Creon or Pancrex. This is because the stomach normally only allows small food particles to go into the duodenum. Here they are mixed with digestive juices and bile (from the liver) so that the food is digested and absorbed. If the surgery has resulted in the loss of the stomach, and possibly the gall bladder and pancreas as well, the whole digestive process will be affected. The food and the digestive juices mix at the wrong time, with the result that the body only digests and absorbs a small proportion of the food that you have eaten, and important nutrients are lost. In particular, undigested fats can cause persistent diarrhoea. This shows up in grey diarrhoea-like stools, called steatorrhoea. Try to keep to a low-fat diet, because in this case the fattier your diet the thinner you become - the fat in the diet increasing the risk of diarrhoea. In the first year after the total removal of the stomach it is particularly advisable to take pancreatic enzymes, and this may need to be continued for longer. These enzymes can be prescribed by your doctor.

Pancreatic enzymes can come in either capsule, tablet or granule form. The purpose of the capsule shell, and of the tablet coating, is to protect the contents from the acid in the stomach. If you have no stomach this protection is no longer needed, and its presence can slow the effectiveness of the enzymes. For this reason it is always best to take pancreatic enzymes in granule form. If you find you have been prescribed capsules or tablets, the simplest thing to do is to remove the protection either by tipping the drug out of its capsule shell or by crushing the tablets.

How to take pancreatic enzymes

They work best if they are taken little at a time, with a drink, during the course of your meal. **Don't** sprinkle the granules on your food because this makes them less effective. If you wear a denture, you should be careful not to get the granules stuck between the denture and the gums, because the granules can damage the lining of the mouth.

You should usually spread the dosage, taking one dose at each of the three main meals. If this gives you diarrhoea, you could consider splitting the dose and taking half between meals. The dosage can be doubled if it is not proving sufficiently effective. An improvement can only be attained by a combination of a low fat diet, and appropriate medication

How long should the drugs be taken for?

In order to decide whether you need to continue taking the medication, you need to monitor your stools carefully. Density, smell and colour are all important.

1. **Density:** the greater the quantity of excreted undigested fat, the lower the density of your stools will be and they will float in the toilet. If they sink, then you can assume that level of medication is correct.

2. **Smell:** a penetrating smell is due to excessive excretion of protein. Incomplete digestion of fat results in other nutrients also not being properly absorbed, and the result is that food is passed too fast through the colon, resulting in diarrhoea.
3. **Colour:** a lighter colour indicates a higher excretion of fat.

When all three characteristics become normal, you can consider slowly reducing the medication. If your stools remain normal, you can stop taking the medication altogether.

Heartburn or acid reflux

During the first few weeks after stomach surgery, the digestive juices and bile are usually secreted too late, lagging behind the food. As a result the digestive juices in the small intestine can rise up into the oesophagus and cause inflammation. In the long term this can lead to serious complications. If you have heartburn you should counteract it with a warmish drink and a light snack such as crackers. If this problem persists it can be treated with cholestyramine tablets. Take half a tablet 20 minutes after each main meal, and immediately before going to bed. Do talk to your doctor about this problem.

Severe abdominal pain

We are all familiar with a severe stomach pains and cramps. Here are three helpful tips from Mr Mestrom:

1. Try a herbal tea (caraway, fennel, aniseed). Put four teabags in a litre of boiling water, and allow to draw for ten minutes. Drink at intervals throughout the day.
2. Take Iberogast drops (usual dose 25 drops) washed down with a little water
3. In the case of really bad cramps, Buscopan can help.

Warning: If taking Buscopan still does not bring relief you should see your doctor. There is a possibility that you have a bowel obstruction, in which case you will need to go to A&E.

Wind

Fizzy drinks can cause wind, so you may need to avoid them. You should check whether you have been keeping to a low fat diet over the last few days and have taken enough pancreatic enzymes. If you have, then you may need to take a Simethicone preparation before every meal and before going to bed.

Dealing with nausea

If you are feeling sick for no obvious reason, it can be helpful to take Metaclopramide. If the problem persists ask your doctor about other drugs you could try.

Getting enough vitamins

Vitamins are essential for the body to work properly and stay healthy. Since the body cannot make them itself, they must be present in your food. A normal healthy diet with plenty of fresh fruit, vegetables and wholegrain cereals, will contain all the vitamins you need. However after removal of the stomach it may be difficult to eat a normal healthy diet, and even if you can, you may not absorb all the nutrients and vitamins that you do eat. Because you are recovering from surgery you may actually need more vitamins than you normally would. For these reasons

it is probably a good idea to take a multi-vitamin supplement for at least the first six months after surgery. This can be in the form of a liquid preparation or a chewable tablet. Because your body does not store vitamins it is sensible to spread the dosage across the day if possible, rather than taking it all at once.

Watching the vitamins

Vitamins A, D, E and K belong to the group of fat-soluble vitamins. This means that they can only be absorbed with the aid of the fats from our body. However after removal of the stomach the breakdown of the fats in the intestine is upset and they may not be properly absorbed into the blood. As a result vitamins A, D, E and K may not be absorbed in sufficient amounts. Because the fat-soluble vitamins play an important role in maintaining and building the skeleton, any deficiency can lead to osteoporosis. So to ensure that your body gets enough fat-soluble vitamins, it may be advisable to ask your doctor for three-monthly injections of vitamins A, D, E and K. Because the injection will be into the muscle, and not the digestive tract, the vitamins will be directly absorbed into the bloodstream. The injection has a long-term effect, and any more frequent administration of fat-soluble vitamins A, D, E and K can lead to a damaging accumulation of these vitamins. Excess fat-soluble vitamins are not excreted, but deposited in adipose tissue. Discuss with your doctor.

Vitamin B12

Vitamin B12 is a vitamin essential for blood formation. It is usually absorbed into the blood by means of an enzyme-like substance called “intrinsic factor”, which is found only in the stomach. There is sufficient B12 in a normal diet for our needs, but in the absence of a stomach the intrinsic factor is not produced, and vitamin B12 cannot be processed. This may in time lead to anaemia. To ensure that your body receives enough vitamin B12, you will need a three-monthly injection. A blood test may show that you need it more often. The range of doses is between 1 per week, every two weeks, every month, every six weeks, every other month and once every three months

Anaemia

The body needs some time to regenerate following surgery, and it is normal for your iron level to be low. If the values do not rise within three months after surgery, something needs to be done. If both the iron and ferritin levels are low, an iron supplement is essential, preferably by injection. If just the iron level remains low, but the ferritin level is increasing, you can safely wait a bit, because natural regeneration is taking place. In the case of severe anaemia, when the haemoglobin level, the red cell count and the iron levels are all low, you should be looking for a blood transfusion.

Are dietary supplements really necessary?

The market is full of both solid and liquid dietary supplements, as well as so-called “balanced diets”. Whether any of these is right for you will depend on their composition. According to the experience gained in Hermann Mestrom’s clinic, the fat content should not exceed 30%. The quantity of carbohydrates and proteins are less important. As a guide the calorie content should more or less match the volume on the bottle one for one: eg a 500ml bottle or package should contain about 500kcal.

We recommend that you consider taking dietary supplements for the first half-year after stomach surgery, particularly if you are losing weight.

Dietary supplements should be an addition to your normal food intake, and not a substitute for a normal diet.

Manufactured supplements usually contain valuable minerals, vitamins and trace elements, in addition to proteins, fats and carbohydrates. Some products also cover a large part of the daily calcium needs. It makes sense to take such supplements after your evening meal, so that you do not reduce your normal daily intake of food. As for all other foods, supplements should be taken slowly, and in small quantities. Taking them too fast can result in diarrhoea. Talk with your GP. The advantages of taking such supplementary foods are that you may feel less tired and you can put on weight.

What to do about significant weight loss

An operation, a stay in hospital, and eating problems, can all lead to your losing weight. Most patients will lose approximately 15% of their original body weight. If you lose too much you need to make a conscious effort to correct the loss, because you will feel tired and generally unwell. Also with a limited food intake the metabolic processes in your body may be impaired but this might well pass unnoticed. Unfortunately there is no magic way to put on weight. Clearly an important factor is your food intake, and how well that food is digested. As described above, dietary supplements can be a useful source of additional nutrients and calories.

How many calories do I need? A rule of thumb is to take your height in centimetres, subtract 100, and then multiply the result by 25. For example, a woman whose height is 170cm needs

$(170 - 100) \times 100 = 1750$ kcal per day. If she wants to put on some weight, she should aim to eat a further 300 kcal per day.

What is there to watch out for during chemotherapy?

During chemotherapy it is advisable to take a daily vitamin B complex capsule. This should be continued for six months after the therapy, and should help reduce the tingling or numbness felt in the fingertips and feet. It also makes sense during chemotherapy to cool the oral mucosa, which can be done by simply sucking ice cubes. The mucosa can become very inflamed and can easily be damaged. A mouthwash with Kamillosan[®] (30 drops to half a cup of lukewarm water) can be helpful, or even gargling with sage tea.

Do I need blood pressure lowering drugs?

If you were on medication to lower blood pressure before your surgery, it is advisable to check your blood pressure for some time after surgery. Low blood pressure is not uncommon after stomach surgery, so check with your GP whether he would recommend medication for this.

Caution: Never try never to raise your own blood pressure, e.g. by an increased salt intake. This could be life-threatening.

Do I need a flu vaccination?

Without a stomach, you can assume that there is a certain immune deficiency. Experts recommend that you get an annual flu vaccination

What about getting a hepatitis-A inoculation?

Thanks to its antibacterial properties, the acid in the stomach gives a natural protection against any unwanted infection that might arise from contaminated food. When there is no stomach, this protection is no longer available, and bacteria infections are more likely. If you like to holiday in Mediterranean countries there is an increased risk of contracting hepatitis-A, so speak to your doctor about getting a hepatitis-A inoculation.

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