Centre of Reference for Bariatric/Metabolic Surgery

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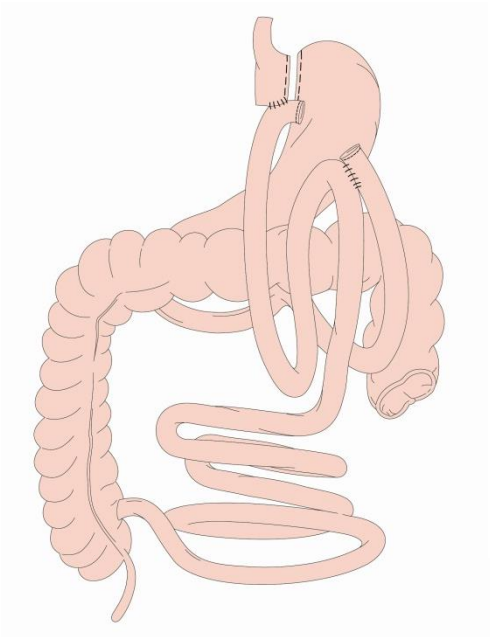
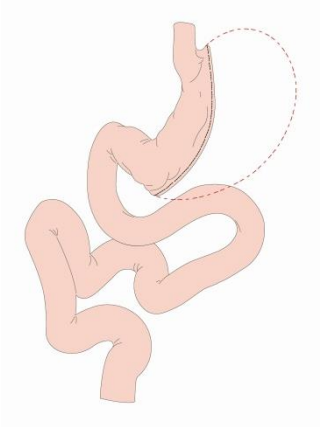
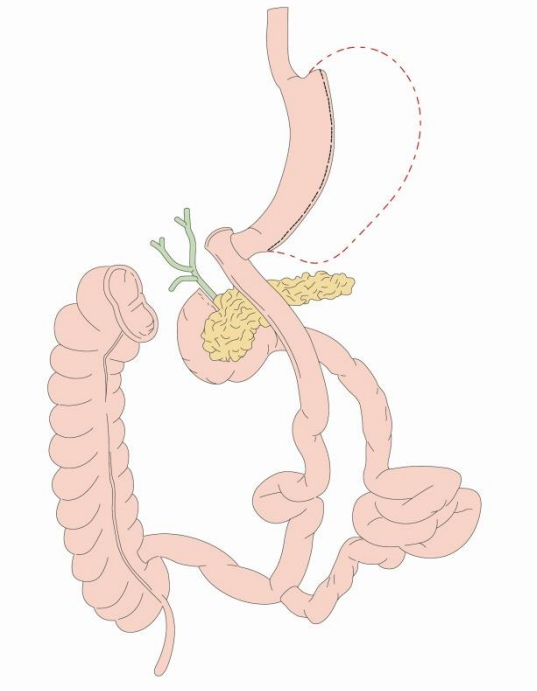
PATIENT INFORMATION LEAFLET

(May 2018 version)

Surgical treatment of morbid obesity at the Claraspital, Basel







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Why surgery for morbid obesity?

More than 30% of people are overweight in the majority of western industrialised nations. If a person weighs 45 kg over their normal weight or double their normal weight, this condition is called morbid obesity. Today, we use the term body mass index (BMI), which is defined as the body weight divided by the square of the height in metres; the unit is kg/m^2. People with a BMI of more than 35 kg/m^2 have a considerably shorter life expectancy (by about 8 years for women and 13 years for men). Morbid obesity can lead to other medical conditions such as diabetes, lipid metabolic disorders (increase in blood fat), high blood pressure, cardiovascular diseases, damage to the joints, gallstones, cancer, and psychological and social problems. However, these secondary disorders can be treated successfully or even prevented by sustainable weight reduction.

There is still a great preconception among the population, but also among doctors themselves, that the patients affected should simply eat less. However, a great deal of scientific data now proves that there is usually a strong hereditary predisposition with morbid obesity and, with an abundance of food and lack of physical activity nowadays, the disease of "obesity" can break out. Like most patients suffering from obesity, you have also probably often tried to reduce your weight – perhaps through dietary changes, medication, exercise therapy, psychotherapy, hypnosis or group therapies. Particularly if you lose weight too rapidly, you often gain even more weight afterwards (the yo-yo effect). Once you exceed a BMI of 35 kg/m^2, these treatments only very rarely result in long-term success.

Surgical procedures, on the other hand, are effective in the long term. Apart from the weight loss, surgery also improves the healing of secondary disorders for the majority of patients, ultimately also increasing their quality of life and life expectancy. To achieve this favourable effect following an operation, the surgery needs to be regarded as part of a complete programme to treat obesity. This means that individual evaluation, preparation and lifelong aftercare are vital. Choosing the ideal time for the surgery is also on an individual basis.

How do these surgical interventions work?

There are various ways in which weight loss surgery can work:

1. With the so-called "restrictive" methods, the capacity of the stomach is reduced. You get a feeling of being full or satisfied sooner when you eat, and so you eat a smaller quantity of food. One of the restrictive procedures is the gastric band. Gastric sleeve (sleeve gastrectomy) and gastric bypass surgery also work restrictively but have more far-reaching effects (see 3.).
2. "Malabsorptive" surgery reduces the absorption of foods by bypassing certain gastrointestinal segments, in other words, it brings about an artificial nutritional deficiency. If only the stomach and the first part of the small bowel is bypassed (gastric bypass), certain vitamins and trace elements are absorbed in smaller quantities; if larger parts of the small intestine are bypassed (biliopancreatic diversion), fats, carbohydrates and proteins are also poorly digested meaning the calorie uptake is reduced.
3. These surgical procedures (apart from the gastric band) also work by changing certain "satiety hormones and hunger hormones", which are normally produced in the stomach and the intestine depending on the food supplied. With bypass surgery or the removal of parts of the stomach (gastric sleeve), these hormonal changes directly affect the appetite, thus affecting the type and amount of food intake. These digestive tract hormones also have a direct, favourable effect on the sugar metabolism, which is particularly beneficial for diabetics.

Which operation is suitable for which patient?

Although weight loss surgery has been performed for more than 50 years, there is still no clear definition regarding which patients need which surgery. Initially and up until 2004, we dealt almost exclusively with gastric band surgery at the Claraspital. However, this operation (which is probably the gentlest one) did not produce the desired successful results for all patients – so, nowadays, the operations described below are the only ones we choose for primary intervention. There are also other, newer procedures that we do not use as the primary option because not enough is known generally about the long-term outcomes. However, we may consider them at a later point if necessary. Various factors influence the decision – the degree of obesity, eating habits, age, sex, extent of secondary disorders (especially diabetes), and possibly also the measured metabolic rate, fat burning, reflux, etc. Finally, the patient's wishes are also taken into account. We examine all of these factors with scientific evaluation of patients who come for surgery in the Claraspital.

When are you eligible for surgical treatment?

According to the regulations in force since 1 January 2011 (www.smob.ch), in order for the costs to be covered by the health insurance, you must meet the following criteria:

1. BMI of more than 35 kg/m^2
2. You are prepared to change your eating habits, have outpatient check-ups on an ongoing basis and increase your exercise level according to your capabilities.
3. You underwent approved weight reduction treatment for two years without success (or one year if your BMI is greater than 50 kg/m^2)

The surgery must be performed only at a hospital that has an interdisciplinary team with the necessary experience and that treats the patient in accordance with the applicable guidelines (www.smob.ch). The treatment is subject to strict quality criteria. Depending on the expertise of the respective hospitals, a distinction is made between primary and reference centres. Claraspital is a centre of reference, fulfilling the criteria for a European "centre of excellence".

The decision as to whether you are eligible for surgery involves our metabolism and nutrition specialist, nutritionist, psychiatrist or psychologist with experience in eating disorders and, finally, the surgeon. After you have returned the comprehensive questionnaire to us, we will arrange a first appointment for you to have initial examinations at our Centre for Nutrition and Metabolism, and these will take at least half a day. The results and the decision regarding the way forward will be discussed with you later on. In conjunction with your surgeon, a decision is then made regarding which of the operations described here may be suitable for you.

What dietary changes are necessary after surgery?

Following weight loss surgery, the stomach that is available for intake of food will have been reduced considerably in size. This means that you can eat only very small quantities of food at a time. Thus, it is absolutely essential to divide your food into six small, balanced meals during the first few months, in order to guarantee a continuous supply of energy and nutrients to your body.

For this reason, we recommend starting your day routinely with a small breakfast consisting of a starch and protein source. Lunch and dinner should be made up using the so-called "perfect plate" principle, that is, they should each contain sources of starch, protein and vegetables. In the initial phase, the portion size for a main meal is about six tablespoons. For the three snacks, dairy products are extremely suitable as they will help cover your protein requirement. Depending on the individual requirement, it may make sense to take an industrial protein product as a dietary supplement for a certain time following the surgery.

Due to the small volume of the stomach, you have to separate food and drink after having the surgery. Your stomach simply no longer has room for both. Depending on the operation, you will also have to mostly avoid sugar and reduce your intake of fat to a minimum.

Because of the very small portions, eating natural foods can no longer cover your vitamin and mineral requirements after any of the surgical options, so these have to be supplied by multivitamin tablets.

General Information

Procedure for hospital stay

Before you are admitted to hospital, our nutrition counselling team will give you training in two group sessions on your new way of eating and getting the nutrition you need. We also provide you with detailed written advice on how you should eat in the future. Depending on your individual cardiovascular risk, a cardiac stress test may also be carried out beforehand, as well as a lung function test if necessary.

You are usually admitted to hospital on the day of the operation, or the previous day where appropriate. If you have not had an X-ray examination, lab test, gastroscopy and measurement of the pressure in your oesophagus before admission, they will be carried out during your hospital stay.
Under general anaesthetic, we access the stomach via a laparoscopy, which requires a total of five incisions in the abdominal wall. Only very rarely is a larger abdominal section necessary. If you have gallstones, we will also **surgically remove the gallbladder**. This additional operation helps to avoid subsequent complications with gallstones and prolongs the surgery by 20-30 minutes. Complications such as injury to the bile duct, bleeding, inflammation, etc. are very rare. There are not expected to be any drawbacks in terms of nutrition, even in the long term.

The postoperative diet generally begins on the first day following surgery, usually after an examination involving X-ray with a contrast agent. The diet is built up gradually, progressing from a liquid diet to mushy food and then to soft, finely-chopped food. To avoid a dumping syndrome (see below), all desserts in the postoperative diet are sweetened with artificial carbohydrate-free sweeteners. The hospital stay is around five to seven days.

Follow-up treatment
You must not lift any heavy weights (more than 5kg) for about six weeks to allow the wound to heal properly. You attend follow-ups in the Nutrition Centre a short time after leaving hospital and your long-term aftercare gets underway, in addition to check-ups by your GP.

The various operations

1. Laparoscopic gastric bypass
2. Laparoscopic sleeve gastrectomy (gastric sleeve)
3. Laparoscopic biliopancreatic diversion

1. The laparoscopic gastric bypass

The gastric bypass was first performed in 1966 by E. Mason. It is the most common procedure in the world for the treatment of morbid obesity. Since the mid 1990s, the operation has also been performed by laparoscopic means, i.e. using keyhole surgery.

Principle

Below the oesophagus, the stomach is divided into two parts using staplers. This means that the upper portion, about the size of a ping-pong ball, is separated off from the rest of the stomach. The upper section of the small intestine is severed and one part of it is attached to the smaller part of the stomach. The small intestine coming from the closed-up part of the stomach and containing the digestive juices from the duodenum (gastric juices, bile and pancreatic juice) is sewn into this intestinal loop that has been drawn up. This bypasses the remaining stomach (see Fig. 1). In addition to limiting the amount of food eaten, this operation (a "proximal" gastric by-pass) also brings about a nutritional deficiency of certain vitamins and trace elements, but not calories.

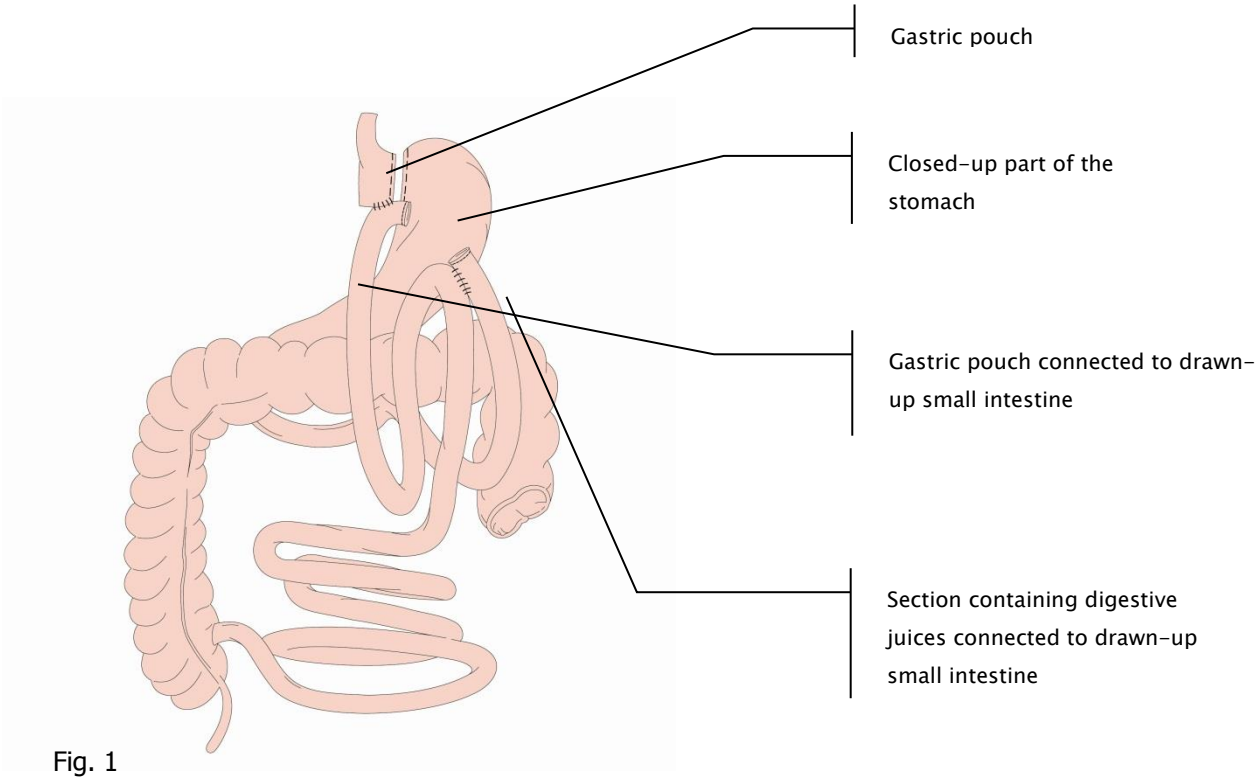


Fig. 1

Weight loss

Five years after the "proximal" gastric bypass operation, 50–70% of the excess weight has been lost. (Example: a patient weighing 110 kg with a height of 160 cm has a normal weight of 60 kg and 50 kg of excess weight. The average weight loss to be expected is 25 to 35 kg). This weight is lost mainly in the first year following the surgery but there is often a slight increase in weight again after two years. The point at which your body weight levels off depends on how consistent you are with your dietary changes and increasing your exercise level.

Advantages

Gastric bypass surgery has been performed for more than 50 years, and so the long-term effects are known. It is the most frequently performed operation for the treatment of morbid obesity in the world and also at the Claraspital. It is suitable for most patients, including those with eating disorders (so-called binge-eating-disorder, recurrent overeating). It is also effective for patients with diabetes. Compared to the gastric band, the

quality of life in terms of food intake is considerably better. The operation can also be reversed. This is very rare but is possible with reasonable effort.

Disadvantages/risks

The laparoscopic gastric bypass is a technically demanding operation. The gastrointestinal tract is opened in different places and closed again or sewn together, which introduces the possibility of a leak with inflammatory complications. There are also general complications such as infection of the wound, thrombosis, pulmonary embolism, bleeding into the intestine, effusions of blood into the abdominal cavity and impairment of transport in the intestine, which are all very rare. The risk of death for this operation is below 0.5‰ (1 in 2000). In the medium term, the connection between the smaller part of the stomach and the small intestine may narrow, but it can be widened again by gastroscopy. Very rarely, the two parts of the stomach may reconnect to each other, resulting in an increase in the amount of food eaten and weight gain. The closed-up part of the stomach generally can no longer be seen in a gastroscopy without performing a small operation. Vitamins and trace elements must be taken consistently for life, but symptoms of deficiency may still appear (of vitamins and trace elements such as iron and zinc, etc.). Following a gastric bypass operation, you have to avoid consuming sugar, especially sugary drinks and fruit juices, and large quantities of refined carbohydrates (e.g. white bread, white pasta). If sugar or carbohydrates in concentrated form reach the small intestine, this results in so-called "dumping syndrome" (dizziness due to a drop in blood pressure, nausea, diarrhoea). Even having drinks during or shortly after a meal can encourage dumping syndrome. In a low percentage of patients, if there is a severe weight loss, slit-shaped gaps may appear between the intestinal loops. This can cause internal "entanglement" of sections of the small intestine, with pain and possible impairment of transport in the intestine (internal hernia) several months or even years after the operation. If not enough weight is lost or one of the above complications occurs, it may be necessary to perform another operation. Before a repeat operation, we generally do a re-evaluation with the entire treatment team. If there is not enough weight loss or very severe dumping, we may consider installing a so-called Fobi ring (a silicone band that is placed around the gastric pouch), which delays emptying of food into the small intestine. Some centres insert this ring routinely in every bypass. We only consider this possibility later in the process if the patient does not lose enough weight or experiences severe dumping. Changing the lengths of the different intestinal sections may also be considered on a case-by-case basis in order to increase weight loss. However, this also increases the long-term risks, similarly to the operation described under point 3.

2. Laparoscopic sleeve gastrectomy

In recent years, a new therapeutic concept has been introduced for extremely obese patients who require an operation such as that described in point 3. Since it is precisely these patients for whom such a major operation is too risky, only the first part is performed in an initial step (the sleeve gastrectomy by laparoscopy). Then at a later point in time, after the body weight has been considerably reduced, the second part of the operation can follow. For some patients, however, the weight loss results have been so good that they have not needed the second procedure. The examinations carried out at our hospital up to 12 years after a gastric sleeve operation also show pleasing, successful results that are very similar to those with the gastric bypass. In the long term, there may not be quite as much weight loss or success with diabetes and lipid metabolic disorders in comparison with the bypass operation.

Principle

A sleeve is formed from the stomach by separating off the elastic, outer portion along the length (see Fig. 2). This sleeve is not elastic and so the capacity of the stomach is also smaller, which results in a feeling that your appetite has been satisfied sooner when you eat. Removing this part of the stomach affects the satiety hormones to the extent that patients feel very little hunger for a longer time.

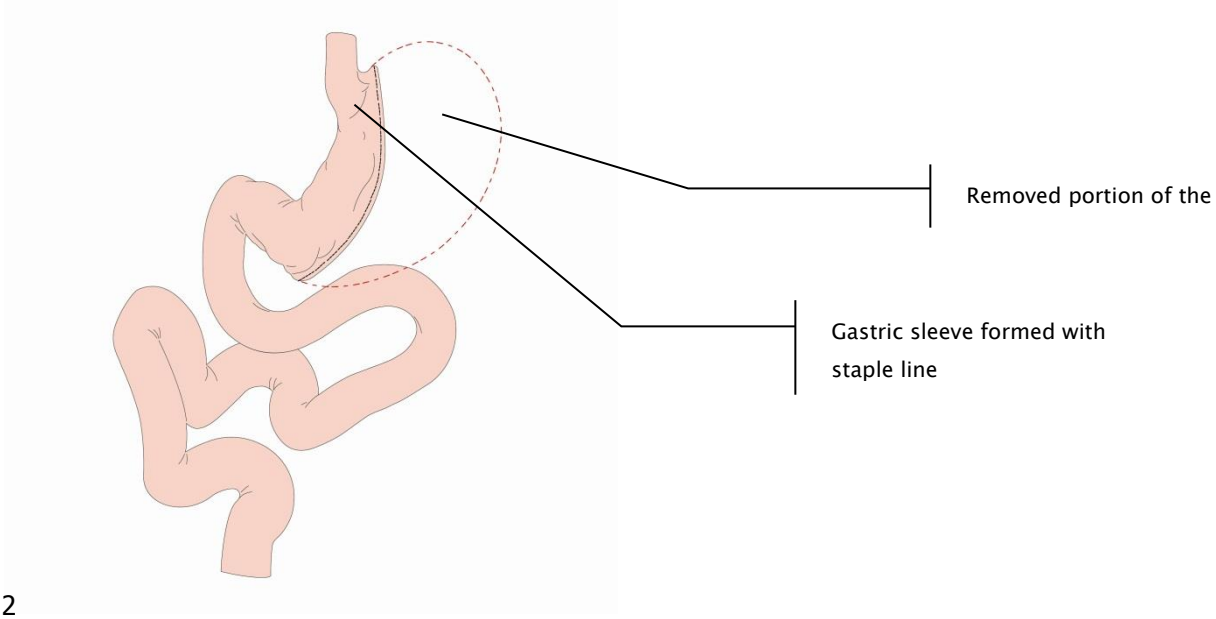


Fig. 2

Weight loss
There is little information on long-term results for this operation. According to information in literature and our own experience, weight loss in the first five years is comparable with that following the "proximal" gastric bypass operation. The excess weight is reduced by up to 70% in the first five years following surgery and by almost 60% after nine years. Some patients then put weight on again or they do not lose enough weight, making it necessary to have a second operation to bypass the small intestine as described in point 3. It is not yet clear at present how many patients will need this but, according to current estimates, it is around 10 to 20% of patients with a gastric sleeve.

Advantages
The laparoscopic gastric sleeve surgery is simpler to perform than the gastric bypass surgery as the stomach is just separated off and a connection does not have to be made between the stomach and intestines. Therefore, this surgery is probably also less risky. The stomach and duodenum can also be viewed by endoscopy if necessary following the surgery, which is very important for treatment, particularly in the event of gallstones in the bile ducts. The "internal hernia" problem does not occur also. If the weight loss is not sufficient, the operation bypassing the small intestine (see point 3) can be performed additionally in a second step. Quality of eating and quality of life seem very good, without having to suffer the side effects of the small intestine bypass. The surgery is also suitable for patients with eating disorders (so-called binge-eating-disorder, recurrent overeating). It is also effective for patients who have had diabetes for many years and those who have a body mass index of more than 50kg/m^2.

Disadvantages/risks
Gastric sleeve surgery has been known for many years as part of the operation described in point 3. As an operation in its own right, however, there is not yet as much experience as with a bypass. According to our experience, the gastric sleeve surgery is almost on a par with the gastric bypass except for a significantly increased rate of heartburn (acid reflux) after the operation. However, this can generally be successfully treated with medication. Failing this, the gastric sleeve can also later be converted into a bypass if the acid reflux into the oesophagus is too severe. For patients who already have severe reflux of gastric juices into the oesophagus before the operation, it would be better to perform the gastric bypass. In the gastric sleeve surgery, the removal of a portion of the stomach is final and cannot be reversed. The mortality rate and complication rate are probably lower than the gastric bypass but higher than the gastric band. The most likely early complications are leaks from the stomach that was separated off and difficulty with intake of food shortly after the operation. There are also general complications such as wound infection, thrombosis, pulmonary embolism or effusions of blood, which are all very rare. Symptoms of deficiency can also appear (e.g. iron deficiency) if the recommended vitamins in the form of tablets or effervescent tablets are not taken consistently. In the long term, weight may be regained or the patient may experience reflux symptoms that require examination with an endoscopy.

3. Biliopancreatic diversion

In the '50s, the bypass of the small intestine (jejunoileal bypass) was introduced as a malabsorptive operation, in other words, an intervention that caused an artificial nutritional deficiency. It was later banned again due to the severity of the side effects. Intensive research was subsequently carried out into a similarly successful procedure but with fewer side effects. In the '70s, Prof. N. Scopinaro of Genoa tested the biliopancreatic diversion using the animal model and then performed it on a large number of patients, with successful results. Prof. P. Marceau of Quebec, Canada, modified the procedure by cutting through the stomach not crossways but lengthways (sleeve gastrectomy), and he has also treated a well-documented number of patients with this method since the late '80s. In recent years, either Scopinaro's version or Marceau's modification is used when performing this procedure.

Principle

With the biliopancreatic diversion, all three of the mechanisms described above come into effect. The reduction of the stomach volume (restrictive part of the surgery) initially limits the quantity of food eaten considerably. One part of the stomach is separated off lengthways (gastric sleeve). As a result, weight is reduced soon after the surgery. Without restricting the quantity of food eaten like this, the diarrhoea due to the artificially created short intestine would be too much of a stress on the patient. Over time, however, it will be possible for the patient to consume more or less normal quantities of food if the gastric sleeve was not made too narrow, usually without the patient regaining the weight. This is possible because the small intestine is shortened to a length of 2.5m. None of the intestine is removed but a bypass is performed to make this the length available for digestion (Fig. 3).

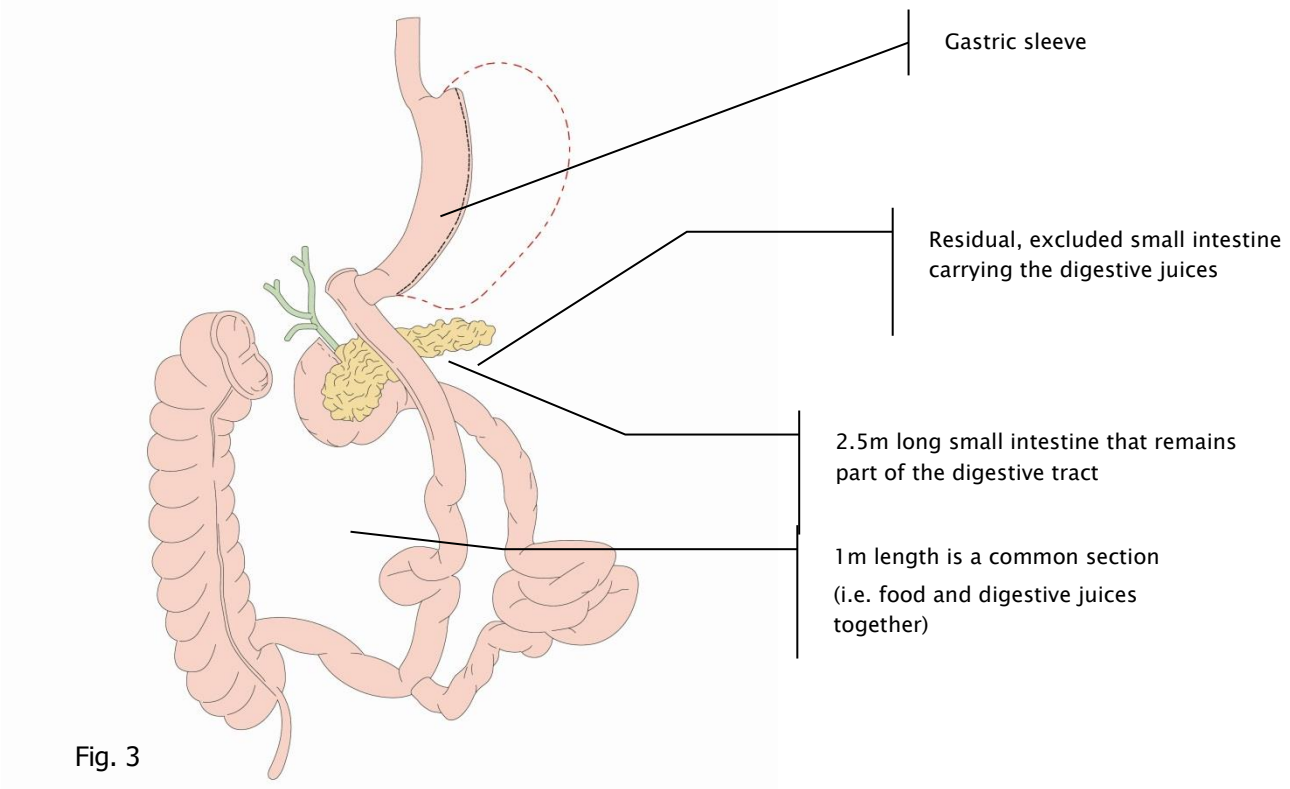


Fig. 3

The food components, especially the fatty ones, are only partially absorbed into the blood in the shortened intestine, so they are undigested or only partially digested when they reach the large intestine. This results in diarrhoea and in foul-smelling flatulence and stools due to decomposition of the fat by the intestinal bacteria. Thus, the sleeve gastrectomy results in weight loss shortly after the surgery, and the short intestine means that the low weight is maintained. The favourable hormonal effects are even more pronounced than they are with the bypass or with the gastric sleeve alone.

Weight loss

Five years after the biliopancreatic diversion, a loss of 75–80% of the excess weight can be expected. (In the example of the patient who weighs 110 kg and has a height of 160 cm, with a normal weight of 60 kg and excess weight of 50 kg, the weight loss would on average be 37 to 40 kg). This is certainly the most successful surgical method in terms of weight loss.

Advantages
With regard to food, patients with biliopancreatic diversion probably have the best quality of life. There is also maximum weight loss.

Disadvantages/risks
A disadvantage of this procedure, first of all, is the size of the operation itself, with the associated surgical risks. The gastrointestinal tract is opened in several places and intestinal loops sewn together, bringing with it the risk of a leak. General complications such as wound infection, thrombosis, pulmonary embolism or effusions of blood are considered the main risks, but they are all very rare. The mortality rate is below 1% according to the source cited. In the long term, symptoms of deficiency may appear, especially deficiency of fat-soluble vitamins, which must be taken long-term. It is also possible that not enough trace elements will be absorbed. The most important thing is the metabolism of calcium to prevent bone loss (osteoporosis) and kidney stones. Patients have to ensure to consume enough protein. Corresponding symptoms of deficiency are rare but can also have drastic consequences if this is recognised too late. If the operation is performed as open surgery, in other words, by abdominal section, there is a risk of an incisional hernia forming (more than 20%). There may subsequently be follow-on surgery because of excess skin, but this is only covered by health insurance under very specific conditions. Especially in the first year after surgery, diarrhoea may occur several times a day, but sometimes also at night. Diarrhoea is also made worse by a fatty diet, which is why we recommend a diet that is considerably reduced in fat after the surgery. Foul-smelling flatulence is common and sometimes requires treatment with antibiotics.

Procedure for hospital stay
At the Claraspital, we perform the "duodenal switch" version of the biliopancreatic diversion in accordance with Marceau. We also remove the gall bladder, regardless of whether or not there are gallstones. This in all likelihood avoids complications from gallstones, as otherwise they frequently occur following malabsorptive surgery. We occasionally also remove the appendix (incidental appendectomy). Like almost everywhere in the world, this complicated procedure was previously performed only by open abdominal section. We are also able to perform this operation laparoscopically and it is only rarely that the open surgery must be chosen. Then, the operation is performed with a combined anaesthesia method whenever possible, that is, with anaesthesia and epidural analgesia (epidural pain management). This means that the patient has little to no pain in connection with the surgery. Occasionally, a short stay in the intensive care unit can be expected. The postoperative diet generally begins on the first day following the surgery, usually after an examination involving X-ray with contrast agent. The diet is built up gradually, progressing from a liquid diet to mushy food and then to soft, finely-chopped food. All of the food is low-fat so as to avoid symptoms such as diarrhoea and foul-smelling flatulence. You should prepare for a five to 10-day stay in hospital.

There is a variation of this surgery where it is performed in two separate steps (see point 2). In the first step, the gastric sleeve is formed by laparoscopy (using small incisions). If there is not enough weight loss, then the second part of the biliopancreatic diversion is performed, where the 2.5m-long small intestine is routed up to the duodenum that has been severed transversely.

Follow-up treatment
The risk of a vitamin deficiency or protein deficiency is particularly high with this surgery, which is why you have to take vitamins on a very regular basis and sometimes even have certain vitamins injected regularly. Medication may be necessary if flatulence (foul-smelling wind) or diarrhoea is too troublesome. If the worst comes to the worst, the procedure can also be partially reversed, but this again requires major abdominal surgery. There may subsequently be follow-on surgery because of excess skin, but this is only covered by health insurance under very specific conditions.

General effects of surgery related to weight loss

Vitamin deficiency
To avoid a vitamin deficiency with possible complications after the surgery, you need to take multivitamins/trace elements regularly for life after surgery, starting from when you leave the hospital. You also need regular blood tests to check your vitamin supply. Certain vitamins (vitamin B12) and possibly iron sometimes also have to be administered by injection or IV.

The multivitamins are not covered by the health insurance.

Folds of skin/excess skin
Because of the major, sometimes rapid, weight loss, a possible long-term effect is excess skin and the appearance of skin folds, (especially around the stomach, upper arms and legs) with changes to the breasts for women, and this can sometimes look unsightly. In extreme cases, this can even hinder movement. It may be possible to avert it to some extent with intensive muscle training. We also collaborate with a plastic surgeon in this regard. However, subsequent operations such as a tummy tuck, upper arm or thigh lifts are only covered by health insurance under exceptional circumstances.

Skin folds and excess skin can only be assessed with respect to supplementary plastic surgery after the weight has stabilised, that is, 2-3 years after the bariatric surgery. The "natural skin tightening" and the effect of muscle training cannot be assessed until this point in time.

Exercise
To promote and ultimately maintain the weight loss after the surgery, regular physical and sporting activities are absolutely essential. Studies have shown that medium to high-intensity physical training of 150 minutes or more per week results in considerably more weight loss in the first year following the surgery.

Our physiotherapy team will be happy to instruct you on the training methods. At the Claraspital, we have developed long-term gentle endurance training in groups that is specifically adapted to the needs of our patients. The cost of this group therapy is covered by the health insurance. This training achieves optimum fat burning and strengthens the entire organism, resulting in increased well-being and better performance. After an initial test to assess each patient's performance, capacity in the endurance area and many other factors, we work out the optimum training area and discuss this. Patients go through a training cycle of 36 lessons under the expert guidance of experienced physiotherapists with in-depth knowledge. The training units will provide guidance for independent training and they are designed to be very varied. With regular testing, patients' progress can be accurately measured and the training readjusted if necessary. As a result, the training is perfectly matched to the physical capacity.

However, it is also important that you start thinking early on about how you want to integrate exercise into your everyday life.

Hair
Surgery, serious illnesses, rapid weight loss and also vitamin deficiency can lead to increased hair loss. Therefore, hair loss may increase even within the first three months following weight loss surgery. This is by no means comparable to the hair loss known to occur with chemotherapy and tumour diseases. The hair just thins out more – instead of losing approx. 100 hairs per day, which is normal, you could be temporarily be losing up to 300 hairs per day. This returns to normal by itself within about six months when the rapid weight loss slows down and the vitamins and trace elements are kept in the normal range by an appropriate diet and appropriate supplements in tablet form if necessary.

Weight gain following the surgery
It is possible to put on weight again in the long term after all of the operations. This makes it particularly important to adhere to the diet and exercise guidelines for the long term.

Alcohol
Following surgery on the gastrointestinal tract, one of the changes that occurs is the body's reaction to foods and drinks that contain alcohol. It has been proven that patients with a gastric bypass exhibit a considerably higher blood alcohol level after having had the same amount of alcohol as people who have not had surgery and, in particular, that the level also decreases at a significantly slower rate.

So for patients who are drivers, the well-known "one glass rule" no longer applies. They need to be aware that they will react more strongly to alcohol after the operation and are also more likely to have adverse effects. In general, it should be noted that the quantity of alcohol you can tolerate will be considerably less than before the surgery (fitness to drive).

Pregnancy and contraception
The risk for a pregnancy that occurs 18 months or more after gastric bypass surgery is comparable to a "normal" pregnancy. We advise against pregnancy before this period of 12 to 18 months following the surgery. For

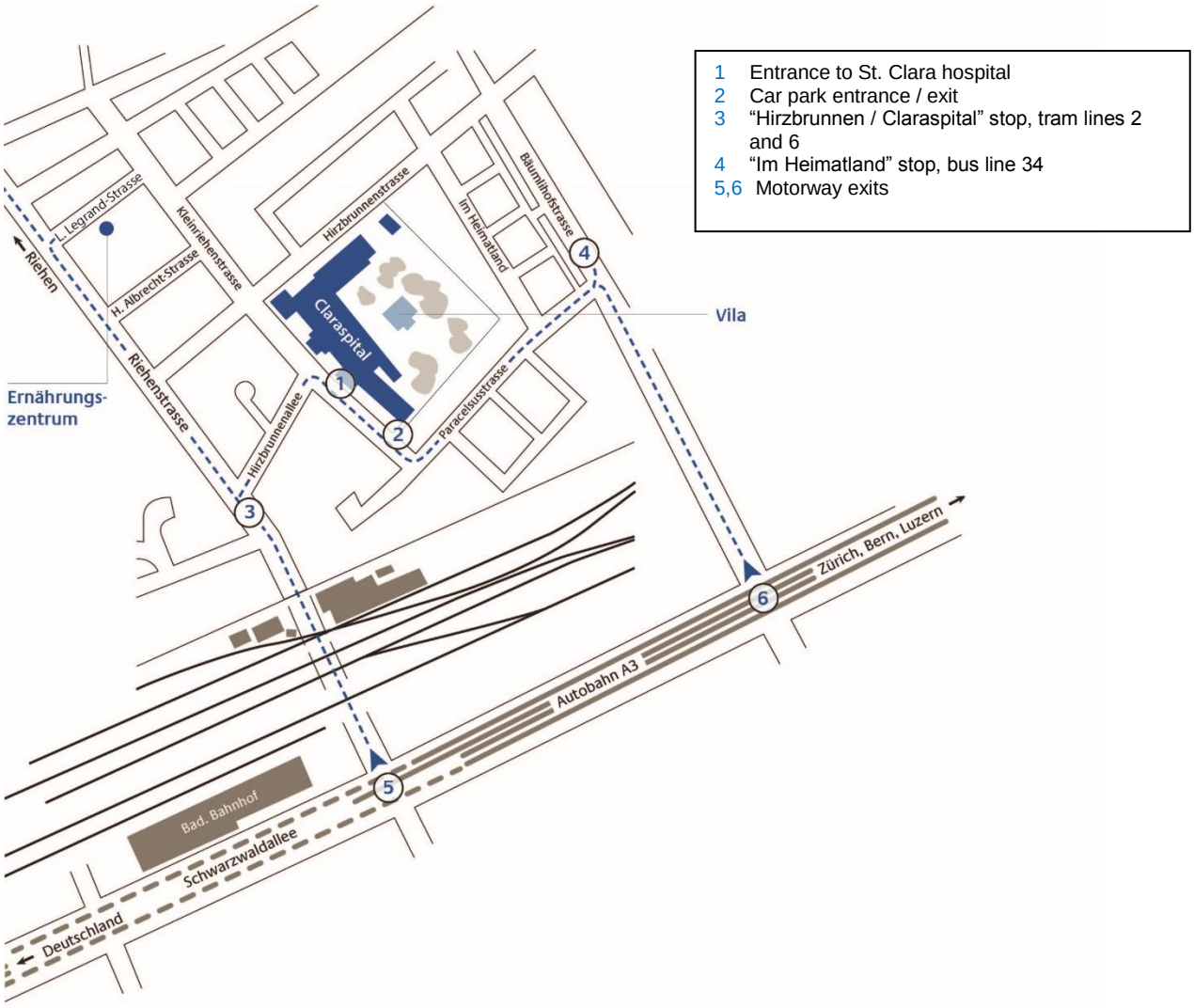
this reason, it is essential to use reliable contraception during this time. For each patient, the contraception method must be chosen individually according to the risks and benefits. Therefore, please consult your gynaecologist as early as possible. Since there may be vomiting or diarrhoea following surgery, the effectiveness of the pill may possibly be reduced; in this situation, therefore, an additional contraception method such as condoms must be used.

In any case, please let us know if you are thinking of becoming pregnant (18 months after the surgery at the earliest). This is so that we can coordinate the monitoring of the vitamins and trace elements accordingly beforehand and, if necessary, replace vitamins for you before the pregnancy that can no longer be administered after conception.

Donation of blood
After weight loss surgery, you have a greater need for vitamins and trace elements, including iron. Every time you donate blood, you lose a considerable amount of iron. Therefore, donating blood after the surgery can present a health risk for you as it will put you at a greater risk of anaemia due to an iron deficiency. Therefore, we strongly advise against donating any blood at all after the surgery.

Treatment and aftercare following the surgery
Regardless of which procedure you decide on together on with us, following surgery you will need the support of our qualified nutritionists and the medical team of Prof. Peters in the Nutrition Centre, with the frequency varying depending on the procedure. It is generally determined during the evaluation whether psychological or psychiatric support will also be needed. In any event, the surgery marks the beginning of long-term care by our team, and as a patient, you make a commitment to keep the follow-up appointments, which means very close monitoring initially and then once a year in the long term. This is also a condition for the health insurance to cover the cost of the procedure. If there are no problems, the aftercare can be taken over by the GP after 5 years.

Contact addresses



Surgery
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