Nutritional advice after bariatric surgery

azdelta
Uw ziekenhuis.

Content

Dear patient,

Your well-being and the optimum successful result of the procedure long-term, is dependant from not only a good follow-up, but your motivation and cooperation are important here.

As the physical anatomy is made smaller, the point at which you will feel satiety or a feeling of fullness will happen quicker. At the beginning, you would like to eat more, but that is not the intention at all. It is very important that you will learn to recognize this feeling of fullness and immediately stop eating.

By adapting your eating habits and learning this new eating behavior, you will be able to prevent discomforts like nausea and vomiting.
In this brochure you will find some tips to help you with this.

We wish you all the best.

The dietary department

1 Change your eating habits

Tips

- Chew very well. Tackle any dental problems.
- Take small bites. Use a dessert fork/spoon and put down your knife and fork after each bite.
- Use a dessert size plate. The smaller quantity of food will look more appealing on a smaller plate, and you will not notice the portion is of a smaller size.
- Stop eating and drinking, when you are feeling 'full'. Extra eating or drinking can cause nausea.
- Whilst eating the meal, it's better not being pre-occupied doing other things such as reading the paper or watching TV.
- Make sure you are in a comfortable position at the table. By eating slowly and being in a calm relaxed atmosphere, free of distractions, you will enjoy and savour your mealtimes.

- Stop drinking half an hour before the meal, do not drink during your meal, and wait 30 minutes after the meal to drink something. This way food is not pushed along your digestive tract by the fluid and prevents you becoming hungrier sooner.

2 A healthy and varied diet

Although the volumes that you can eat are very limited, we strive for a healthy and well-balanced nutrition. It is advisable taking 3 meals a day: breakfast, lunch and dinner. At 10 o'clock and in the afternoon, you can take a healthy snack, without any sugars and a low fat content.

Some patients have an aversion to particular foods, where other patients are able to eat anything. This is quite normal. You can test your palate, by trying tiny amounts of a particular food. If you aren't able to tolerate a particular food type-don't worry, you can try it again at a later date.

What tips should you follow for each food product?

Drinks

- If you take big gulps and drink too quickly, you may feel uncomfortable. Take tiny sips, as if you were drinking from a bottle with a filter-top.
- Consume sufficient **sugar-free** drinks between meals, such as still water, coffee or tea without sugar, low-fat broth, low-fat vegetable soup, non-sparkling soft drinks, etc.
- Light soft drinks can be consumed to a limited extent (max. 1/2 litres per day). Allow the gas to escape as much as possible in the initial phase. Be careful with drinking coke, coke light or coke zero as these increase the risk of stomach ulcers due to high phosphoric acid.
- Avoid sweet drinks as juices (even when they're sugar free), soft drinks and sugared milk drinks.
- Limit the use of alcoholic drinks to a minimum. Bear in mind that the effect of alcohol is accelerated and intensified.

Bread

- Toasted brown bread, wholemeal crackers and rusks are generally better tolerated.
- Fresh bread is difficult for the body to digest, and may get stuck at the beginning of the gastric outlet. It's preferable to use older brown bread. Avoid sandwiches and pastries, and if you have to eat bread, only choose to eat the crust of a roll, avoiding the inner crumb. This crumb, like white bread, can be heavy on the stomach.

Potatoes, pasta and rice

- Cook potatoes, pasta and rice until they are fully cooked.
- Take a high-fiber product, like brown rice or brown pasta in preference to the white starchy pasta.
- Take thicker pasta, that you can better chew.
- Mashed potatoes are not a problem.
- Croquettes, or lightly toasted potatoes can be eaten after 3 weeks, in a limited way.

Vegetables

- Let vegetables cook through, especially in the beginning.
- Gas-forming vegetables (Brussels sprouts, paprika, mushrooms, onions) are more difficult to digest.
  If you experience problems after eating these types of vegetables, it is best to avoid them for the time being.
- Soft, uncooked vegetables can be gradually introduced from the 3rd week.

Fruit

- Take a piece of fruit every day, start with soft and ripe fruit, possibly fruit in its own juice.
- Shelled and fruit without the pith is easier to digest.
- Sometimes it is better to peel citrus fruit.
  Citrus fruits can be juiced. (max. the juice from 1 piece a day)
- Nuts are best avoided during the first few weeks.

Meat

- Meat like roast beef, cutlet, steak,... are fibrous, dense and contain a lot of connective tissue. They are difficult to chew, as they tend to form into a ball, which is difficult to swallow. It is best to avoid these in the first few weeks.
- Soft meat like chicken and turkey are a good choice
- Limit eating lots of minced meat, hamburgers or sausages, rather take minced poultry or minced veal.
- Finely cut lean meats (ham, sliced chicken breast, turkey ham...) are generally well tolerated.
- Avoid tendons, rinds and pieces of cartilage.

Fish

- Fish is better to tolerate then meat, also oily fish.
- Use fish 2 times a week.
- Breaded fish and ready-made fish are discouraged because of the high energy value.

Eggs

- Eggs, mainly under the form of scrambled eggs, omelettes, fried egg or soft-boiled eggs, are well tolerated by the stomach. Hard-boiled eggs are a little harder to digest.

Milk-products

- Choose low-fat, semi-skimmed, unsweetened milk-products.
- If normal milk is less well tolerated, you can switch to low-lactose milk or soy drink.
- Low-fat cheese spread, low-fat flat cheese and low-fat hard cheeses, can be taken.

Fats

- Choose fats rich in unsaturated fatty acids (olive oil, coleseed oil, soft and liquid margarine).
- Too much fat slows the emptying of the stomach and can lead to heartburn and diarrhea.

Dressings

- Limit the use of mayonnaise and opt for ketchup, pickles, mustard, light mayonnaise and light vinaigrette.
- Avoid high fat sauces based on butter, eggs or cream.
- Milk sauce based on low-fat or semi or skimmed milk, broth sauce with low-fat broth can be used to a limited extent.

Sugars

- Avoid sweets, chocolate and ice cream. They slide easily through the small stomach, but they mostly cause dumping syndrome.
- Sugary food contains a lot of calories and fat, with none of the benefits of vitamins and minerals.
- Replace sugar by low-calorie, artificial sweeteners.
- If you like jams and marmalade, try to have the reduced sugar products.

Some tips when you go to a restaurant

- Drink 1 glass of aperitif and do not eat appetizers.
- Do not drink too much while you are eating, limit the use of alcohol.
- Forgo a starter, or take the starter as main meal, the quantity is ideal.
- Ask for separated sauces.
- Order coffee or tea instead of a dessert.

Building scheme

> 1st and 2nd week

- **Lunch**
  - wholemeal crackers/rusks or toasted brown bread
  - thinly spread with margarine. thinly spread with low-fat cheese spread or low-fat confiture (chutneys)
  - avoid chocolate spread, biscoff spread, fatty meats and fatty cheese

- **Warm meal**
  - Mashed potatoes
  - fish, egg (soft-boiled, scrambled eggs, etc.), softly finely cut meat or Quorn cubes
  - Soft-boiled or stewed vegetables like cauliflower, broccoli, chicory, spinach, carrots ...
  - Quantity: semi dessert plate

- **Snack (when there is a need for)**
  - Coffee cup size of soup
  - Low-fat unsweetened yoghurt or cottage cheese
  - A piece of soft, ripened fruit

- **Drinks**
  - Unsweetened drinks without the fizz (still water, light coffee or tea)

The first week after gastric SLEEVE it is best to have a very soft, creamy diet. Do not eat hard foods.

> From the 3rd week

- There should gradually be extended: normal bread, cooked potatoes, pasta, meat, soft raw vegetables
- Carbonated drinks: first let as much gas as possible escape.
- Gradually increase portion size to fit on dessert plate only
- Try fruit and vegetables to suit your taste.

The aim is to have a varied, healthy , balanced diet.

Daily schedule as from week 3

BREAKFAST	• 1 to 2 slices brown or wholemeal bread, thinly smeared with butter or low fat spread. • filling: low-fat cheese/low-fat meat/ low sugar jam or marmalade
AFTER HALF AN HOUR	unsweetened drinks
SNACKS BETWEEN MEALS	a piece of fruit or low-fat, unsweetened yoghurt/cottage cheese or a coffee cup size or soup
AFTERNOON	1 dessert plate (1/3 potatoes/rice/pasta + 1/3 vegetables + 1/3 meat/fish/egg)
AFTER HALF AN HOUR	unsweetened drinks
INBETWEEN	piece of fruit or low-fat unsweetened yoghurt/cottage cheese
EVENING	• 1 to 2 slices brown or wholemeal bread, thinly smeared with butter/ low fat spread • filling: low-fat cheese/low-fat meat/ light jam
AFTER HALF AN HOUR	unsweetened drinks
LATE AT NIGHT	if you feel the need to: a piece of fruit or low-fat yoghurt/cottage cheese

3 Complaints after a bariatric procedure

The Dumping Syndrome

Why do Dumping Symptoms start?

- The food ends up in the smaller stomach or directly in the small intestine.
- The constrictor between the stomach and the small intestine, is missing, so the food is no longer evenly dosed and goes more speedily into the intestines.
- By drinking with the meals, the passage of food is accelerated.
- The stomach can no longer grind, mix and knead, whereby overlarge food chunks go to the small intestine.

The Dumping Syndrome occurs mainly with the Gastric Bypass procedure and less after a Gastric Sleeve.

Early dumping symptoms:
These occur fairly rapidly after eating (+ half an hour).
Early symptoms arise when food in large quantities arrives in the small intestine. This highly concentrated food mass attracts a lot of moisture in the small intestine. This liquid is withdrawn to the surrounding blood vessels. That causes the following complaints:

- a full uncomfortable feeling
- abdominal pain and intestinal cramps
- diarrhea

In addition, there is a decrease in blood pressure, because moisture is extracted to the blood vessels. As a result of this reduction in blood pressure, there will be some complaints as:

- palpitations
- dizziness
- generalized feeling of weakness
- drowsiness
- sweating

Later-onset dumping symptoms:
They can present after about 2-3 hours after eating the meal
These late symptoms are caused by the lack of coordination between blood sugar levels and insulin production.

Because the food passes through the small intestine too quickly, certain sugars can be absorbed more quickly. High blood sugar requires the production of insulin.

But insulin production is always slightly behind in time. So a lot of insulin can be produced, while the blood sugar has already left the bloodstream. At that time, there is a deficiency of sugars in the bloodstream.

The following symptoms can appear:
- sweating
- restless feeling and shaking
- dizziness
- hunger
- need to eat something sweet
- palpitations
- fainting

What to do in case of dumping?
Once you have a dumping syndrome there is no usual treatment. It is important to follow the above advice carefully to avoid a dumping syndrome.
Do not drink in case of dumping symptoms, the symptoms will get worse.

If you have any symptoms, it is best to lie down after a meal. The body resolves the symptoms by itself.
You can keep a diary in which you list the dumping symptoms to understand the cause of the symptoms.

If you have late dumping symptoms, due to a lack of sugars in the bloodstream, it is best to solve this by eating slow sugars such as a banana, a brown sandwich with a topping,

a wholemeal cracker with a topping... Do not take dextrose or a normal sugared soft drink.

You can avoid late dumping by not eating fast sugars and by respecting the intermediate meal with slow sugars.

What to do in case of other problems?
In case of vomiting or nausea after eating, you have to ask yourself the following questions and try to find out if you have made mistakes.

- Have I eaten too quickly?
- Have I chewed my food thoroughly and slowly?
- Did I eat too much/ were the bites too big?
- Did I drink after the meal?
- Did I drink too quickly after the meal?
- Have I eaten food with too much sugar?
- Do the problems appear each time after I consume milky sugary products?

Ask your doctor in the following cases:

- repeated, frequent vomiting.
- repeated, black, loose smelly stools.
- sudden onset stomach pain, coupled with vomiting.
- the feeling that you can eat large amouts of food without getting a feeling of satiety or fullness.

When you get the feeling that food is stuck, stop immediatly with eating and try to drink small sips. If you feel that the fluids after a few hours still can't pass, and you are in discomfort, contact your doctor.

Constipation

Many patients are struggling with constipation stool after a bariatric procedure. After all, there is less stool because there is a reduced food intake. After the procedure, the fluid intake is often reduced, whereby the problem increases.

This tips can be help:
- Make sure you drink plenty
- Include fibre in you diet
- exercise enough.
- if necessary a supplement with soluble dietary fibres can help.

Burping and gas

- Eat quietly and chew enough
- Do not speak while eating
- Do not chew chewing gum
- Avoid carbonated drinks, cabbage, leek, onion, garlic, cucumber and bell pepper

4 Exercise

It is important that you not only adjust your food habits, but it is advisable to do more exercise. The calories you absorb and that not are consumed, are stored as fat. To lose weight, the body has to burn more calories, then the calories your body absorb through the nutrition. This is only possible by doing exercise.

Start slowly with exercise. As the weight decreases, the exercises become easier. It is recommended to move 30 minutes each day. Choose activities that you like, and you can do whenever and wherever you want.

You can also increase your physical activity in everyday life.

- Take the stairs instead of the lift.
- Go, if it is possible, on foot or by bicycle to an appointment instead of by car
- Park your car a bit further away.
- Get up regularly from your chair or seat.
- Walk around while dialing with your mobile phone
  Pick up your daily newspaper (by foot or bicycle) at the newsagent.
- Avoid food from the freezer and go to the butcher or department store daily for fresh food.
- Buy your fruit and vegetables at the market.

5 Weight control

In the first year after the surgery, you have to monitor your weight regularly, but not too often. Once a week is enough. You will probably come in to contact with other patients who have undergone bariatric surgery. Do not become desperate when other patients lose weight, quicker than you. The speed of the weight loss depends on various factors, like initial weight, gender, metabolism, muscle... Do not forget: the scales are your friend and not your enemy.

6 Follow-up

Hospitalisation
During the hospitalisation, the dietitian visits to go over the food for the first few days.

After the procedure
After 2 to 4 weeks, a thorough evaluation is performed by the doctor and the dietitian. It is difficult to predict how you will respond to the new situation. The diet is modified and adjusted individually.
You should visit the doctor and dietitian at regular intervals for further follow-up.

7 Pre-procedure diet (600 kcal)

Follow this schedule closely during 10 days prior to surgery.

It causes the liver to shrink and reduces the fat in the abdomen. This increases the chances of success of the operation and reduces the risk of complications.

Daily schedule

breakfast
1 slice of wholemeal bread (30g)
1 topping of low-fat cheese/cheese spread/cottage cheese, lean meat,
coffee, tea, water

morning
low-fat, no-sugar dairy product

noon
soup
raw or low-fat vegetables
100 g lean meat or 160 g lean fish or 2 eggs

afternoon
low-fat, no-sugar dairy product

evening
soup
raw or low-fat vegetables
100 g lean meat or 160 g lean fish or 2 eggs

later
low-fat, no-sugar dairy product

Points for attention

- Drink plenty (up to 1.5 litres – 2 litres per day): still water, sparkling water, light coffee, light tea. Light or zero soft drinks in moderation.
- **Do not** consume sugar, sugared drinks, fruit, fruit juices, nuts, potatoes/pasta/rice. Maximum one slice of bread per day.

Food list

skimmed, no-sugar dairy products

- 150 g low-fat cottage cheese (with sweetener)
- 150 g Skyr cottage cheese (with fruit) (with sweetener), Hipro, Melkunie
- 250 ml low-fat yoghurt (with sweetener)
- 250 ml low-fat fruit yoghurt 0% sugar
- 300 ml skimmed milk/buttermilk
- 200 ml Cécémel less sugar

lean meats

- low-fat cooked chicken (boiled, air fryer, steamed)
- roasted turkey fillet
- roasted steak
- turkey ham or sliced chicken breast
- low-fat ham
- filet d'Anvers, filet de Saxe
- raw and pure minced beef
- cooked, steamed (oven, papillote) or grilled white fish

vegetables

- low-fat cooked vegetables (steamed, boiled): cauliflower, carrots, broccoli, chicory, leek, French beans, spinach, etc. (no peas, corn, legumes, beetroot)
- raw vegetables: chicory, carrots, cucumber, tomatoes, lettuce, etc. (with limited use of low-fat dressing)
  (no avocado)

soup

Boil all kinds of vegetables (onion, leek, celery, carrots, broccoli, etc.) in plenty of water for 15 to 30 minutes.
Add a low-fat stock cube per litre.
Do not add fat, potato or cream.
You can mix the soup or not.

Recipes

Recipes for low-fat dressings based on low-fat unsweetened yoghurt or cottage cheese: use to a limited extent!

low-fat cocktail sauce

- 2 tablespoons low-fat cottage cheese
- 1 tablespoon tomato ketchup (Heinz less sugar)
- pepper, salt (finely chopped tarragon, parsley)

low-fat yoghurt vinaigrette

- 125 ml low-fat yoghurt
- ½ small onion finely chopped
- 1 teaspoon mustard
- 1 teaspoon lemon juice
- pepper, salt, chopped parsley and chives

cottage cheese dressing

- 4 tablespoons low-fat cottage cheese
- 1 teaspoon mustard
- 4 gherkins finely chopped
- pepper, salt (tarragon)

herbal dressing

- 125 ml low-fat yoghurt
- Finely chopped silverskin onions and gherkins
- 1 teaspoon capers
- 1 teaspoon tomato ketchup
- paprika powder, pepper, salt and chopped parsley

Pre-procedure diet with protein preparations

You can also work with protein shakes or meal replacements instead of the previous schedule. The shakes can be supplemented with still water, low-fat soups, sugar-free drinks, low-fat prepared vegetables and raw vegetables.

Examples of protein shakes are:
- X-daylight
- Prowell
- Modifast
- ...

If you choose protein preparations, ask the dietitian for advice on the type and quantities.

"You should only follow this adjusted diet in preparation for the operation. You should NOT follow this schedule after surgery."

Notes

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