



DIETARY GUIDELINES AFTER AN ENDOSCOPIC SLEEVE GASTROPLASTY (ESG)

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Preface

The ESG is a new technique for losing weight, in which the stomach is reduced without surgery. This is done through the mouth, under complete anesthesia. A gastroscope is inserted through the esophagus into the stomach. Sutures are placed to reduce the volume of the stomach. This technique is reversible. There are no scars. A small amount of food is enough to give a feeling of fullness.

Although the ESG helps you to achieve a permanent weight loss, it is not a slimming method that works automatically. It is always necessary to adjust your lifestyle and eating habits in order to achieve and maintain a successful weight loss and to avoid complications. It is important to follow the post-operative diet.

After an ESG, in addition to a healthy diet, sufficient exercise is also important.

Diet

The nutritional adjustment after an ESG consists of several phases.

We start with a liquid phase and gradually move from a semi-solid food to a healthy, protein-rich solid food.

- Phase 1: liquid food for 3 weeks
- Phase 2: semi-solid food for 3 weeks
- Phase 3: healthy, easily digested protein-rich diet for 2 weeks
- Phase 4: balanced healthy diet with permitted foods.



Phase 1: Liquid food (weeks 1, 2 and 3)

The first three weeks after treatment only liquid food should be eaten. This is to allow the new stomach to heal and to avoid vomiting. It is important to finely mix and dilute all foods.

Use:

- Low-fat milk and yogurt, low fat cheese with no added sugars
- Puddings custards without added sugars
- Milkshake made with low-fat milk and low-sugar vanilla pudding. Various flavorings can be added; vanilla, fresh fruit, pure cocoa, instant coffee
- Calcium-enriched grain drinks without added sugars
- Nut drinks without added sugars (hazelnut drink, almond milk, coconut milk, ...)
- Low-fat yoghurt drink with no added sugars
- Vegetable puree (very finely mixed and diluted with milk so that it is liquid)
- Bread pudding (mix bread without crust mixed with low fat milk and low sugar with cheese (low-fat (20+ or 30+) or light) or jam (with reduced sugars)
- Easily digestible light soup or light clear broth

Phase 2: Semi-solid food (week 4,5 and 6)

The next 3 weeks we switch to semi-solid food.

Semi solid food can be added to the liquid diet:

- Pieces of ripe soft fruit such as strawberries, ripe banana, ripe pear, ripe melon, ripe kiwi, ripe peach
- Avoid fruit that contains peels, skins and seeds such as apples, oranges, grapes, clementines or mandarins
- Small amounts of mashed potatoes and cooked or steamed mixed vegetables
- Small quantities of cooked fish, boiled egg or poached egg. If these are tolerated, ground lean meat or poultry can be added
- Rusks or toast or stale bread without crust, thinly spread with low-fat white cheese or light cheese spread or lean meats or fish or jam with a reduced sugar content.

Eat only three main meals and a maximum of two healthy snacks a day.

Avoid alcohol and carbonated beverages.



Phase 3: Healthy easily digestible, protein-rich diet (week 7 and 8)

After 6 weeks, you can gradually switch to a healthy, protein-rich, energy-restricted diet with more solid foods. The food no longer needs to be mixed or pureed.

Continue to eat easily digestible food. Avoid fibrous vegetables such as asparagus, corn, celery, pumpkin, legumes, cabbage varieties (with the exception of cauliflower and broccoli), sprouts, mushrooms, raw vegetables.

Avoid eating fruit that contains peels, skins and seeds such as apples, oranges, grapes, clementines or mandarins.

No fizzy drinks yet.

Make sure that sufficient protein sources (meat, fish, egg, dairy products, etc.) are included in daily meals.

Phase 4: Normal healthy balanced diet, adjusted diet (From week 8)

Good nutrition remains important two months after the treatment, but it does not have to be easily digestible.

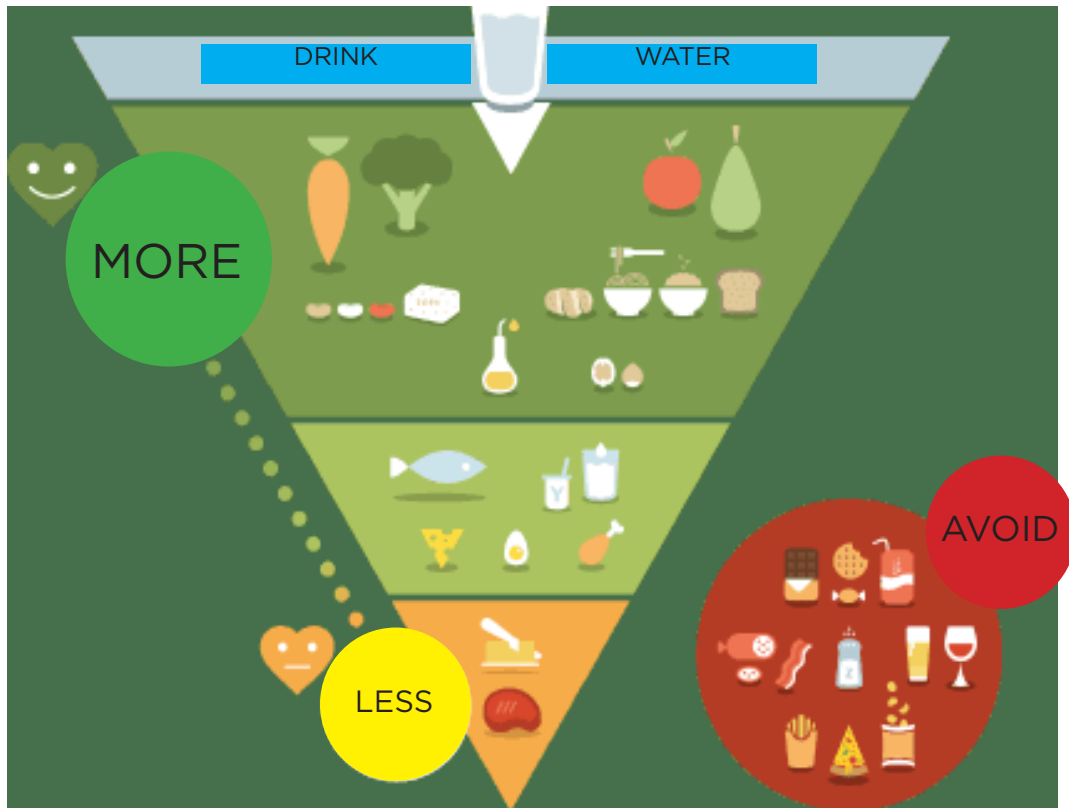
In a healthy lifestyle, it is important to eat healthy, balanced and varied and to exercise sufficiently. But what exactly does that mean? Every day we are confronted with conflicting messages and food hypes (low-carbohydrate diets, protein diets, shakes, etc.) on social media, the internet and in magazines. As a result it is difficult to know what to eat.

The food triangle

The food triangle, an educational model developed by the Flemish Institute for Healthy Living, provides an easy way to determine the basis for a healthy diet. The model was created by bundling all current scientific knowledge about healthy food and to present it visually. This way you can see at a glance which foods are healthy (vegetables, fruit, whole grain products, nuts, ...) and which foods should be restricted (processed foods such as soft drinks, chips, candy, chocolate, alcohol, charcuterie ...). Vegetables, unprocessed, pure food is always better.

When we take a closer look at the food triangle, we see that it is subdivided into different layers or zones. Each layer has its own color. This color reflects the effect the products have on the health.

At the top of the triangle we see 'water'. Our body consists of 75% water. Water is crucial to maintain the moisture balance of our body. Drink enough water every day.



The food triangle itself is divided into three zones and the remainder group:

The dark green zone

The foods from the dark green zone have a positive effect on health. Vegetables, fruit, legumes, nuts, seeds, whole grain products and vegetable oils (rich in unsaturated fatty acids) are foods that belong to this zone.

The light green zone

Foods from the light green zone are of animal or vegetable origin and have a neutral, positive or possibly insufficiently proven effect on health. Fish, eggs, poultry, milk and cheese belong to this zone.

The orange zone

Foods of animal or vegetable origin, such as red meat, butter, coconut oil and palm oil, which have a possible negative effect on health, but which still contain useful nutrients, belong to the orange zone. These are best limited.



The red zone or residual group

Finally, the red zone or residual group contains highly processed products such as soft drinks, alcohol, sweets, chocolate, pastries, ... which contain a lot of sugar, fat and / or salt and have a negative effect on health. This group is separate from the triangle since these foods contain little to no useful nutrients and are not needed in a healthy diet. Do not eat them too often and not too much.

To live healthily, eat vegetables and raw and pure products as much as possible from the upper groups. Ultra processed products from the red circle or residual group are better avoided. Occasional consumption can, but be alert as to how often and how much of the products in this group are eaten.

Information per food product

Water

Water or moisture is an indispensable part of our body. Water is an essential ingredient in a healthy diet. Sufficient drinking is not only necessary for the proper functioning of body processes, but also helps give a full feeling without calories. In addition, patients who do not drink enough after treatment can suffer from constipation. That is why it is important to take at least 1.5 liters of liquid daily, spread over the day and in small sips. Beverages that belong to the water group are flat water, coffee, tea (without sugar) and low-fat broth. Fruit juices are not recommended, this also applies to “unsweetened” and fresh fruit juices that contain many natural sugars that come from the fruit itself. Light sodas should be limited to a maximum of one glass per day, preferably without bubbles.

Take small sips between meals. Drink slowly and take sip by sip. Do not drink just before, during and even just after a meal.
Preferably do not drink alcohol.

Vegetables

Vegetables supply multiple carbohydrates, dietary fiber, minerals and vitamins. Because not all vegetables contain the same vitamins and minerals, variety is very important. In total, we should eat at least 300 grams of vegetables per day. This amount can be reached by eating steamed / stewed vegetables with the main meal as well as some fresh low-fat soup and / or raw vegetables for the other meals and as a snack.



Fruit

Fruit supplies - just like vegetables - carbohydrates (especially simple carbohydrates), vitamins, minerals and dietary fiber. Fruits and vegetables differ from each other because they contain different types and quantities of nutrients. That is why it is necessary to eat both fruit and vegetables every day. The daily recommendation for fresh fruit is a two or three pieces a day. Fresh fruit is preferred but a jar of non sweetened canned fruit can also be used as an alternative. Dried fruit contains a lot of natural sugars and therefore should be limited.

Cereal products and potatoes

Grain products and potatoes provide multiple carbohydrates, vegetable proteins, dietary fiber, vitamins and minerals. They form our basic nutrition. This group includes potatoes and all kinds of grain products such as bread (wholemeal bread, rye bread, multigrain bread, spelt bread ...), rusks, cereals, rice, pasta and other grain products. Multigrain and whole grain products are preferred. They contain more dietary fibers, vitamins and minerals than the refined white ones. Deep-fried potato preparations are better made in the oven or in an airfryer and preferably eaten not more than once a week.

The daily recommendation for cereal products and potatoes depends on age, gender, and amount of activity.

Milk products and alternatives

Dairy products are a very important source of calcium, protein and B vitamins. Calcium is an essential nutrient that contributes to the build-up and maintenance of strong bones. To prevent osteoporosis, sufficient calcium must be taken at all ages. Young people and the elderly need more calcium than adults. Every day 3 to 4 (small) glasses of milk (in total 450 - 600 ml) and 1 to 2 slices of cheese (20 - 40 grams) or derived products are a minimum to meet our calcium requirements. Milk products and other derived products such as yoghurt, buttermilk, kefir and all cheeses (cheese spread) are important, low-fat cheeses are preferable. Vegetable drinks based on grains, nuts and seeds (shake well before use) can replace milk provided they are enriched with calcium. Dairy products such as cheese or yoghurt can not replace main meals; they are better taken as a snack.

Meat, fish, eggs and vegetable substitute products

Meat, fish, eggs and substitute products are a source of protein, vitamins and minerals such as iron that the body needs for the growth, building and recovery of the body.



Meat

Meat is generally a problem. Especially fried, roasted and stewed meat (roast beef, steak, stew, pork, etc.) is difficult to digest. Poultry without skin is generally better digested. Beef and veal minced meat is usually well tolerated.

Avoid searing when frying the meat (digestion difficultly).

Avoid breaded meats that absorb a lot of fat during cooking.

Meat recommendation: max. 80 to 100g / day and preferably only 3 or 4 times a week.

Fish

Is usually better tolerated, poached or grilled and not fried fish. Fish is healthy because of its favorable fatty acid composition, eat both fatty and lean varieties.

Fish recommended: max. 150g / day and preferably 2 to 3 times per week

Eggs

It was assumed for a long time that eggs increase the risk of cardiovascular disease, but this is outdated. They supply proteins and fat. That fat is in the yolk and is largely unsaturated - which is good. In addition, they contain many vitamins and minerals. In this way they are a complete replacement for meat.

Vegetable substitutes

Legumes such as chickpeas, lentils, soybeans, white beans and kidney beans are ideal protein sources. In addition, nuts and vegetable substitutes such as tofu, tempé and seitan can replace meat on the menu. Such meat substitutes are shown in the dark green group of the food triangle.

Grease and cooking grease

Fats used in cooking provide us with energy. In addition, they are important for their essential fatty acids and fat-soluble vitamins (vitamin A & D). Cooking fats include margarines, fats with reduced fat content, butter, lower fat butter and oils. Oil and margarine rich in unsaturated fatty acids (or low in saturated fatty acids, ie less than 1/3 of the total fat) are preferred because they help to prevent heart and vascular diseases.

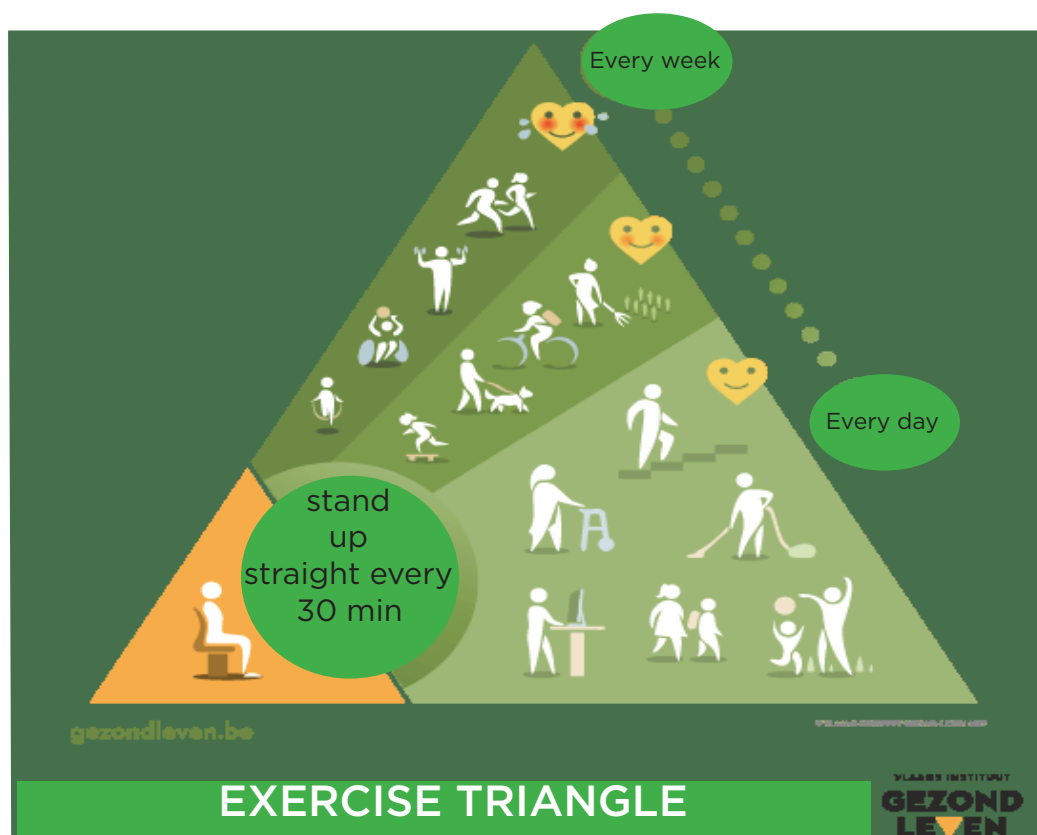
Note: even though the use of cooking fats must be limited, this group is also essential for a balanced diet. A sandwich with 5 g of butter per slice of bread and one tablespoon (10g) of fat per person in preparing a hot meal is sufficient, because food from the other groups (meat, milk products, biscuits ...) can also supply us with a lot of (hidden) fats.

Rest group

The red circle contains all foods that are strictly not needed in a balanced diet. Although these foods they are part of our culture and habits. Sweets, jam, chips, pastries, sweets, sugar-rich and alcoholic drinks, mayonnaise, charcuterie ... can be found in this group. It goes without saying that these foods may only be consumed in moderation. They often only supply calories (fat and sugar) without applying vitamins and minerals.

Importance of sufficient physical activity

A healthy lifestyle is more than just a balanced and varied diet. A healthy mix of sitting, standing and exercising is at least as important. Just regularly standing up while sitting is a step in the right direction. In addition, sufficient exercise is a must. Try to be active at least 30 minutes a day. Choose endurance sports that you can do at a slow pace for a longer time; cycling, swimming, a brisk walk, walking ... Build this up systematically. In order to obtain optimal results keep in mind that your maximum heart rate = $220 - (65 \text{ to } 70)\%$ of your age = ...





When we examine the movement triangle, we recommend:

- Avoid sitting too long and stand up straight every 30 minutes.
- Daily light intensive exercise. For example, light housework, walking around, ... daily activities.
- Move at moderate intensity (at least 150 minutes per week). For example, walking, cycling, swimming, ...
- Move at high intensity (at least 75 minutes per week). For example, walking, brisk cycling, good swimming, ...

Exercise reduces your risk of cardiovascular disease, high blood pressure, osteoporosis, obesity, colon cancer and type 2 diabetes.

Sport and exercise improve your body composition: less body fat, more muscle mass and firmer bones. It also has a positive effect on stress and is relaxing. In addition, exercise is a help for a better night's sleep. Regular exercise combined with a balanced diet ensures that you stay healthy and fit.

If you are operated on in our hospital or under the guidance of our dietitians you can participate in a weekly exercise class given by our physiotherapists. For patients who have joint problems, it can be useful to (initially) train under professional supervision. In this way you can learn which exercises and sports suit you best. You can also receive tailor-made advice via a personal coach (surf to our website).

Some advice on possible problems

Difficult bowel movements

- Drink enough water
- Use sufficient dietary fiber, these include brown and wholemeal bread, bran, whole wheat rusks and cracottes, whole grain rice and pasta, fruit and vegetables.
- Physical exercise is also important for proper bowel movements.
- Extra tips: glass of lukewarm water half hour before breakfast, kiwi or prunes at breakfast, one tablespoon of fat per day.

Regurgitation

- Avoid carbonated drinks, cabbage, leeks, onions, cucumbers, peppers and garlic.
- Avoid strongly seasoned or spicy dishes.
- Eat slowly in a calm environment, not talking while eating
- Do not use chewing gum



Vomit

- In case of vomiting, the acid from the stomach causes irritation of the esophagus and damage to the teeth.

- Symptoms for a full stomach are: painful feeling behind the sternum, regurgitation, nausea and tendency to vomit. It is therefore important to stop eating in time.

- Eat quietly and chew the food and frequently eat small meals. Learn to recognize the volume that you can eat. This is only possible when you eat quietly and slowly. Many patients “overeat” themselves in the initial stages with pain, vomiting and / or nausea as a result.

Eat slowly and chew your food very well and pause between each bite. The meal should last between 30 and 45 minutes. Choose a quiet place to eat, eat consciously and avoid distractions such as TV, etc. Sit with good posture while eating (sitting nicely upright). It is advisable to visit the dietitian regularly after the ESG for a proper further follow-up!



Contact

For an appointment with one of our dietitians, please contact our dietitians Annelies Walgraeve or Lesley Deruddere.

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