Protein intake after bariatric surgery

azdelta
Uw ziekenhuis.

Dear patient,

After bariatric surgery, the risk of protein deficiency is very high. This is caused by reduced food intake, food intolerances and reduced absorption of nutrients. A lack of protein leads to muscle breakdown and other problems including oedema and poor healing of the wound.

Use of protein-rich foods is recommended to prevent these deficiencies and to maintain muscle mass. Since problems with food intake mainly occur in the first year after the operation, it is important to eat strictly protein-rich foods, certainly in the first few months after the operation. A healthy, varied diet makes sufficient intake of all nutrients perfectly achievable.

The dietitians

1 Practical recommendations and tips

- Provide protein-rich foods at every meal.
- For snacks it is best to choose lean savoury toppings. Since the portion of bread/rusk is limited, you can cover it generously with low-fat toppings (double topping is allowed). Sweet toppings do not provide the necessary nutrients.
- With hot meals, first eat the protein source and only then the less protein-rich foods. It is for example best to eat the meat/fish first and then the vegetables and potatoes.
- Lean protein-rich toppings can also be eaten between meals, e.g. a Babybel, cubes of low-fat cheese, a slice of chicken fillet, etc.
- Eat dairy products regularly as snacks.

2 Protein-rich foods

The following foods are preferable to foods rich in carbohydrates or fats. A distinction is made between animal and vegetable proteins. Animal proteins are the best quality and are therefore preferred.



Examples of high-protein bread toppings

- Cheese: slices of light cheese, low-fat cheese spread, light fresh cheese or herb cheese, cottage cheese, ricotta, light mozzarella, etc.
- Meat: sliced turkey, sliced chicken, ham, Filet de Saxe, beef tongue, roast beef, steak tartare, etc.
- Fish: home-made fish or crab salad (made with light mayonnaise), smoked halibut, smoked salmon, surimi sticks, etc.
- Eggs: soft-boiled, fried, home-made egg salad (see recipe)

Examples of high-protein snacks

- Soft cheese 0%

- Skyr, Kvarg (Icelandic-Swedish yoghurt-fromage frais)
- Greek yoghurt 0%
- Protein-enriched dairy products such as Pur Natur high-protein fresh cheese and yoghurt, Optimel yoghurt
- Semi-skimmed milk or unsweetened buttermilk
- Cécémel less sugar or semi-skimmed milk with Canderel Can'kao
- If dairy products are less well tolerated, soya or lactose-free products (without added sugars) can be chosen
- Rice cake or whole wheat crispbread with low-fat topping
- Dips with cheese spread
- Low-fat cheese cubes or Mini Babybel light
- Make your own frozen yoghurt without sugar (see recipe)
- French toast made with wholemeal bread, egg, semi-skimmed milk and sweetener



	PROTEIN PER 100 G PER 100 ML	SERVING	PROTEIN CONTENT PER PORTION
Milk, yoghurt and soft cheeses			
Skyr, Kvarg (Isey, Nestlé Lindahls)	11 g	125 g = 1 pot	13.8 g
Melkunie® protein breaker	6 g	200 g = 1 pouch	12 g
Melkunie® protein pudding	10 g	200 g = 1 pot	20 g
Danone® Hipro protein drink	8.3 g	330 ml = 1 bottle	25 g
Danone® Hipro protein yoghurt	9.3 g	150 g = 1 pot	15 g
Greek yoghurt, low-fat (Optimel, Fage, Oikos, Boni, KriKri)	10 g	125 g = 1 pot	12.5 g
Low-fat soft cheese or fromage frais	7.5 g	125 g = 1 pot	9.4 g
Low-fat yoghurt	4.9 g	125 g = 1 pot	6.1 g

	PROTEIN PER 100 G PER 100 ML	SERVING	PROTEIN CONTENT PER PORTION
Semi-skimmed milk	3.5 g	150 ml = 1 glass	5.3 g

NUTRITION	PROTEIN PER 100 G PER 100 ML	PORTION	PROTEIN CONTENT PER PORTION
Babybel protein	25 g	22 g = 1 piece	5 g
Low-fat hard cheese	23 g	20 g = 1 slice	4.6 g
Low-fat cheese spread	14 g	20 g = 1 triangle	2.8 g
Cheez dippers (sticks with cheese)	10 g	35 g = 1 packet	3.5 g

	PROTEIN PER 100 G PER 100 ML	SERVING	PROTEIN CONTENT PER PORTION
Meat, fish, egg			
Lean meats	22 g	20 g =1 slice	4.4 g
Lean meat	20 g		
Oily fish	18 g		
Lean fish	17 g		
Egg	13 g	50 g = 1 piece	6.5 g
Vegetable proteins			
Quorn	14 g		
Tofu	13.5 g		
Tempeh	13.5 g		
Legumes	8.7 g		
Calcium-enriched soy drink	3.2 g	150 ml = 1 glass	4.8 g

3 Example daily plan

	Wholemeal bread, wholemeal rusk or crispbread, spread with low-fat margarine Double-topped with protein-rich topping (see list)
10 A.M.	1 piece of fruit
11 A.M.	1/2 cup lean vegetable soup
MIDDAY	Lean meat/fish/egg/vegetable substitute, vegetables and potatoes
4 P.M.	1 high-protein snack (see list)
EVENING	Wholemeal bread, wholemeal rusk or crispbread, spread with low-fat margarine Double-topped with protein-rich topping (see list)
8 P.M.	1 high-protein snack (see list)

Note: drink enough water in small sips throughout the day but never during meals.

4 Protein supplements



If the regular diet fails to produce sufficient protein, a supplement can be made with specific protein powders. These contain whey proteins, which are well absorbed by the body.

We aim for a total protein intake of at least 60 g per day. Most protein powders are neutral in taste and can be easily added to both sweet and savoury preparations. Examples include Barinutrics Whey and FitForMe Pure Whey.
Always ask your dietitian for advice.

5 Exercise

Exercise also plays a major role in generating muscle mass. Physical activity stimulates the body to absorb enough protein so that it can generate more muscle mass. The more muscle mass, the better your energy burn!

The aim is to integrate exercise into your daily activities, which will benefit your general health (both physically and mentally). 30 minutes of moderate exercise every day is actually sufficient. This could be walking, cycling, swimming, gardening, dancing etc.

If you start exercising more intensively, protein intake immediately after exercise is also important for optimal muscle recovery. Be sure to choose something from the protein-rich snacks that can be found in this brochure under point 2.

6 Recipes

Belgian-style steak tartare

200 g minced steak, 1 shallot, 2 tablespoons ketchup, 4 gherkins, parsley, Worcester sauce, salt and pepper, tablespoon of dressing

Finely chop the shallots and mix with the other ingredients.

Curried egg salad

3 hard-boiled eggs, cress, 2 tablespoons of low-fat yoghurt or soft cheese, tablespoon of dressing, half a teaspoon of curry powder, pepper

Peel the egg, chop it into small pieces and finely chop the cress. Stir the yoghurt or soft cheese with the curry powder and pepper. Add the eggs, dressing and cress and stir.

Ham salad

100 g low-fat soft cheese, 1 tablespoon of finely chopped parsley or chives, 3 slices of ham, celery salt, Tabasco sauce, black pepper, tablespoon of dressing

Cut the ham into thin strips. Mix the soft cheese and dressing together. Stir the ham through the mix and season with celery salt, Tabasco sauce, parsley and pepper.

Frozen yoghurt with fresh fruit



1 kiwi, a handful of blueberries, a handful of frozen raspberries, 1/2 mango, 350 ml Skyr (vanilla flavour), 50 ml semi-skimmed milk

Cut the kiwi and mango into small pieces. In a blender, blend the Skyr with the milk to make it a little more liquid. Take an ice mould for 6 ice lollies. Place a few blueberries at the bottom of each lolly form, then add a tablespoon of the Skyr on top. Then repeat the process with the kiwi, mango and raspberries. Freeze for at least 5 hours.

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