

## After bariatric (weight loss) surgery: Protein intake

### What is protein?

Proteins are the basic building blocks for the body. They are made of amino-acids and are found in every cell, tissue and organ in the human body.

### Why is protein important following surgery?

- It increases satiety (the feeling of fullness) when eating smaller portions.
- It helps you heal after surgery.
- It helps to preserve more muscle mass while losing body fat.
- Helps to keep blood sugars stable.

### What happens if I don't get enough protein?

Not consuming adequate protein may cause your body to break down its own protein stores (muscles) to meet its needs. Breaking down your muscles will make it harder for you to lose weight and may result in an earlier weight loss plateau. Other signs of inadequate protein intake can include delayed wound healing, frequent infections, weakness, increased hair loss/thinning and dry/brittle nails.

### Can I have too much protein?

Yes. It is not a 'free' food as too much protein will be stored as fat (not muscle). Also, eating very large amounts of protein (over 200g/day) could be bad for the kidneys. If you have any existing kidney problems please discuss your protein needs with your dietitian.

### How much protein do I need after surgery?

A minimum of **60-80g** should be achieved by three to six months following bariatric surgery unless otherwise specified by your dietitian. Immediately following surgery, this may be very difficult to achieve due to the small amount of diet that you are able to take. Your protein target should be split between 3 or 4 meals, aiming for **20-30g** in each meal. If you are struggling to meet this target through diet, you may need to take a protein supplement/shake/or shot.

**Your protein target is \_\_\_\_\_ g per day**

### What are good protein sources?

The best sources of protein are lean meats, poultry, fish, eggs, quorn, milk, low-fat cheese and yoghurt, beans, soya milk, tofu and powdered protein supplements. There are also small amounts of protein in fruits and vegetables and starchy foods.

### Which protein foods should I avoid where possible?

Some foods that are high in protein are also high in fat and therefore high in energy. Foods to avoid on most occasions tend to be the more processed meat products e.g. sausages, bacon, salami, black pudding, chicken wings, breaded/battered fish or chicken, chicken Kiev, sausage rolls, pork pies, scotch eggs. Pork is also higher in fat than other meats, so if having pork chop, gammon or roast pork, ensure all the fat is trimmed off. Hard cheeses should ideally be swapped for soft, low-fat versions.

### How do I achieve my target?

1. Ensure your plate is based on a good protein source. This should cover ½ of your side-plate (7 inch/18cm plate).
2. Use the table below to pick your protein foods for the day.
3. Use weighing scales to check your portion sizes are correct.
4. Check your daily protein intake by adding up the grams of protein for the whole day.

### What can I do if I'm struggling to eat high protein foods?

Following surgery, change in food preferences is common. You may find that you have aversions to specific high protein foods. Incorrect eating techniques after surgery can cause discomfort and vomiting, which is often mistaken for food intolerance. If there are very few protein foods that you are able to tolerate, taking a powdered protein supplement may be appropriate. This should be discussed with your dietitian.

### Vegetables and fruit

Aim for 3 x 80g portions of vegetables and fruit each day, or 6 x 40g portions. These foods often contain fibre which is very filling. Therefore aiming for more portions may reduce the amount of protein you are able to eat. Your vitamin and mineral supplements will help to replace any missing nutrients and a soluble fibre supplement can be prescribed if you experience constipation.

**Always eat the protein portion on your plate first.**

<b>Food</b>	<b>Portion</b>	<b>Protein (g)</b>	<b>Energy (kcal)</b>
<b>Poultry</b>			
Chicken/turkey breast (skinless)	1 small breast (100g)	30	140
Wafer thin chicken	4 slices (48g)	8	64
Chicken drumstick	1 drumstick (75g)	19	139
<b>Fish/seafood</b>			
White fish	1 small fillet (60g)	13	58
Tuna steak	1 small steak (75g)	23	104
Salmon	1 small steak/fillet (60g)	15	129
Smoked mackerel	Half a large fillet (45g)	9	159
Prawns/king prawns	4 tablespoons/9 king prawns	11	50
Tuna (tinned in brine or water)	Half tin (70g)	16	70
Sardines (in oil)	Full tin (100g)	23	220
Fish fingers (grilled)	3 fingers	9	120
<b>Other meats (fat trimmed off)</b>			
Rump steak	1 small steak (68g)	19	155
Wafer thin beef	4 slices (48g)	12	64
Roast beef	2 slices (75g)	22	167
Roast lamb	2 slices (75g)	21	180
Lamb steak	1 small steak	18	150
Pork chop (fat trimmed)	1 small chop (70g)	20	175
Gammon (grilled, fat trimmed)	1 steak (80g)	22	150
<b>Protein supplements</b>			
Meal replacement shake	1 serving made up with skim milk	10-12	200
Whey protein powder	30g scoop made with water	25	130
Soya protein powder	30g scoop made with water	27	120
Skimmed milk powder	1 heaped teaspoon (12g)	4.5	40

<b>Food</b>	<b>Portion</b>	<b>Protein (g)</b>	<b>Energy (kcal)</b>
<b>Eggs, Dairy and Vegetarian protein sources</b>			
Boiled/poached egg	1 medium egg (60g)	7	80
Scrambled egg (made with milk, no oil)	2 eggs with 1/4 pint skim milk	19	185
Omelette (plain with 1 tsp oil)	2 eggs (120g)	14	200
Cottage cheese (plain)	3 tablespoons (100g)	13	100
Feta	5 cubes (30g)	5	75
Mozzarella	2 slices (25g)	5	64
Philadelphia Lightest	1 tablespoon (30g)	3.5	30
Milk (skimmed)	1/2 pint (284ml)	10	51
Yoghurt (0% fat)	150g pot	8	150
Soya milk (non-organic, sweetened)	1/2 pint (284ml)	9	123

<b>Food</b>	<b>Portion</b>	<b>Protein (g)</b>	<b>Energy (kcal)</b>
<b>Eggs, Dairy and Vegetarian protein sources</b>			
Fortified milk	1/2 pint skimmed milk with 2 heaped tsps skim milk powder)	19	131
Tofu (fried)	4 tablespoons (80g)	19	210
Quorn pieces	4 tablespoons (80g)	18	116
Baked beans	Half large tin (195g)	10	164
Chick peas	4 tablespoons (80g)	6	90
Lentils	4 tablespoons (80g)	8	80
Peas	3 tablespoons (80g)	5	60
Mixed unsalted nuts	50g (cupped handful)	9	320
Mixed seeds	25g (1.5 tablespoons)	6.5	150
<b>Add your own foods</b>	<b>Portion size and weight</b>	<b>Protein (g)</b>	<b>Energy (kcal)</b>

Useful websites

British Obesity Surgery Patient Association: [www.bospauk.org](http://www.bospauk.org)

Weight Loss Surgery Information: [www.wlsinfo.org.uk](http://www.wlsinfo.org.uk)

For more information about the Trust, visit our website [www.royalberkshire.nhs.uk](http://www.royalberkshire.nhs.uk)

This document can be made available in other languages and formats upon request.

Centre for Diabetes and Endocrinology, March 2018

Review due: March 2020