

Nutrition in Parkinson's Disease

INTRODUCTION

Nutrition has an important role to play in the management of Parkinson's. On diagnosis of Parkinson's there is no need to make dietary changes, once the diet is well balanced.

This leaflet provides information and advice about following a healthy well balanced diet. It also provides information and advice on nutritional issues such as constipation, changes in weight and appetite, and ways to overcome these problems. It also includes information on diet in relation to Parkinson's medications.

A BALANCED DIET

What should I eat?

Good nutrition in Parkinson's involves eating regularly, and eating a wide variety of foods each day. Choose foods from the different groups each day to make sure you are achieving a well balanced diet.



FOOD GROUPS

Starchy foods

Each of your meals and snacks should have starchy food, such as bread, potatoes, rice, chapattis, yams, pasta, noodles, oats, cornmeal, crackers, toast and breakfast cereals, included.

Fruit and vegetables

Aim for five servings of fruit and vegetables each day. Choose from fresh, frozen, canned or dried fruit and vegetables.

Dairy products

Aim for three to five servings of milk and dairy foods each day. A serving is a third of a pint of milk,

one small pot of yoghurt, or a small matchbox portion of cheese (both reduced-fat or full-fat varieties of milk and yoghurt are good sources of calcium).

Meat, fish and alternatives

Aim for two to three servings each day from this group. Choose from red or white meat, white or oily fish, eggs, beans, pulses and nuts (unless you have an allergy). If you have difficulty in swallowing, smooth peanut butter, scrambled or poached eggs are useful options. Lamb, beef, eggs, beans and pulses will also provide essential dietary iron.

Fatty and sugary foods

These foods can be eaten in moderation. (See 'A healthy weight', below, if weight control is a problem.)

Fluids

It is very important to drink plenty of fluids. Aim for eight to ten cups (six to eight mugs/glasses) each day of water, fruit juice, squash or milk etc. Keep tea or coffee to a maximum of 4-5 cups per day as caffeine in these can lead to dehydration. Eating juicier fruits, such as melon, will also help increase your fluid intake.

Alcohol

Unless you have been advised by your doctor not to drink alcohol, a small amount (e.g. sherry, wine or beer) does no harm and may be beneficial, especially if it encourages a normal social life. The Department of Health and Children recommend that men limit their alcohol intake to 21 units per week, and women limit their intake to 14 units per week. One unit is equivalent to 1 glass of stout/larger/cider (284mls), one small glass of wine (100mls) or one pub measure of spirits (35.5mls). Alcohol intake should be limited to 2-3 units per night for women, or 3-4 units per night for men, with some alcohol free days during the week.

How often should I eat?

Try to have three meals a day, or six smaller ones. In each of your main meals include foods from the different groups.

A healthy weight

It is important for everybody to maintain an optimum body weight. Being overweight or, more commonly in Parkinson's, underweight, can have effects on your health.

Weight loss can occur due to the extra movements associated with Parkinson's. These extra movements can be tremor or dyskinesia, which can both burn up extra energy. If you are prone to extra movements, it may be necessary to increase your calorie intake to avoid weight loss.

It is easy to gain weight when you become less active, and are perhaps eating the same amount of food. However, it is still important to eat a variety of different foods.

How can I keep to a healthy weight?

Below are some tips on how to reduce the energy content of your diet sensibly:

- Do not eat fried foods—use other cooking methods eg grill, bake, steam, boil or microwave.
- Cakes, biscuits and pastries are high in sugar and fat. Reduce the number of times you eat these in the week.
- Sweets and chocolate also contain a lot of calories. Avoid snacking on these between meals.
- Take care with sugary drinks such as cola, cordials, etc. Use 'sugar free' or 'low calorie' drinks instead.

It is still important to have three healthy meals a day to provide all the nutrients and goodness you need.

If you would like advice on weight management, speak to your GP or neurologist and ask to see a registered dietitian.

I find I am underweight – what can I do?

You may find you are underweight, and have difficulty putting weight on. Sometimes weight loss can be due to practical problems to do with food preparation and keeping your food hot while you are eating. Also, we know that a non-motor symptom of Parkinson's is the loss of smell, which can impact on taste or appetite.

If you are underweight, the following advice may be useful, or ask to see a registered dietitian for assessment and advice.

Try to have three meals a day and two to three snacks in between. It is important to try to eat every two to three hours during the day, or at least have a milk shake, malted drink or smoothie. Nutritious supplements (for example soups and drinks) can be purchased from chemists and supermarkets.

Full-fat pasteurised milk is an excellent drink and can be used in cooking. To make it even more nutritious, add three to four tablespoons of milk powder to a pint of full-fat milk, and drink at least one pint every day.

(NB Be aware that milk can thicken the saliva. Please discuss this with a dietitian and speech and language therapist before making changes).

Make the most of adding 'extras' to foods, such as extra cream, butter, or sugar/honey to sauces, mashed potato, vegetable purees, desserts, puddings, porridge, coffee and more. These will make the food more energy dense, and tasty!

Constipation

Many people with Parkinson's will find constipation is a big problem. This can be helped by:

- increasing your intake of fibre-rich foods;
- increasing your fluid intake;
- taking exercise.

How does fibre help?

Fibre works by absorbing fluid as it moves through your bowel, forming a soft stool that can be passed more easily. However, be careful, because too much bulk can increase constipation, especially if you don't drink enough. You require eight to ten cups (or six to eight mugs) of fluid daily.

How to increase your fibre intake

Fibre is found in cereal grains, seeds, nuts, fruit, vegetables and pulses, e.g. peas, beans and lentils. (Loose, extra bran which can be added on to your food, is not recommended as it can lead to bloating and may reduce the absorption of vitamins and minerals.)

- Include high-fibre varieties of foods, e.g. wholemeal bread, wholewheat pasta, basmati or brown rice. Recipes can be adapted to use some wholemeal flour instead of all white.
- Include a breakfast cereal containing wheat, wheatbran or oats e.g. Weetabix, porridge, Bran Flakes.
- Increase your intake of all kinds of vegetables, whether raw or cooked, fresh or frozen. Use more peas, beans or lentils.
- Increase your intake of fruit ie Fresh, stewed, tinned or dried, e.g. bananas, oranges, prunes.

When increasing your intake of fibre, it is important to do so gradually to avoid bloating or flatulence (wind). Introduce one new fibre food every three days.

Most people may find that diet alone is not enough to combat constipation. If your doctor has prescribed laxatives, please ensure you take them as directed, as constipation can cause your anti-Parkinsonian medication to fail. For more information about managing constipation, see the Parkinson's Association of Ireland information leaflet: Bladder and Bowels.

FLUIDS

How much fluid should I drink?

It is essential to drink plenty throughout the day, to help the fibre to do its work. Aim to drink eight to ten cups (six to eight mugs/glasses) every day. Any fluid is suitable, e.g. water, fruit juice, milk, tea, coffee, squashes or fizzy drinks. (NB Fizzy drinks can make some people feel bloated.)

MEDICATION

When should I take my Parkinson's medications?

The ideal time to take your Parkinson's drugs will always depend on your individual medication. You should discuss this in full with your GP, consultant or Parkinson's Disease Nurse Specialist (if you have one).

Food, particularly protein, can interfere with the absorption of anti-Parkinsonian drugs, particularly levodopa (trade names Sinemet, Madopar and Stalevo).

It is important to drink plenty of fluid with your levodopa medication, such as water, squash or juice. This helps with getting the tablets where they need to be in the bowel, so they can be absorbed. However, it is advised that you do not take your Parkinson's medication with milk (see next section).

THE ROLE OF PROTEIN

Can protein affect my medication?

In some people, protein (which is found mainly in meat, fish, chicken, eggs, milk, yoghurt, nuts, beans and pulses) seems to interfere with the effectiveness of their levodopa medication. This is because levodopa is an amino acid, and it will have to compete for absorption with the amino acid produced from dietary protein. Therefore, most people benefit from taking their levodopa 45 minutes before meals, or one and a half hours after meals.

It is recommended that large amounts of protein should not be consumed in a single meal. Protein intake should be spread out throughout the day.

If you do wish to review the timing of your protein intake, please first discuss it with your GP, or ask to see a registered dietitian.

Can I take antacids?

Antacids (e.g. Rennie or Milk of Magnesia, which are used to relieve discomfort in disorders of the

digestive system) should preferably not be taken at the same time as other drugs, since they may impair absorption.

Vitamins, minerals and antioxidants

Eating a well-balanced diet, as recommended in this leaflet, will provide adequate levels of vitamins and minerals for most people. If you feel you need more of a particular vitamin or mineral, it is generally advised that you eat more of the appropriate foods, rather than buy expensive vitamin and mineral supplements.

Some vitamins, when taken in large doses, can cause severe side effects [1].

If you are taking supplements with high doses of vitamins and minerals or need further advice on this matter generally, it is highly recommended that you see a registered dietitian or your GP.

Vitamin B6

In the past when levodopa was prescribed alone, a pyridoxine (Vitamin B6) prescription was recommended due to pyridoxine facilitating the conversion of levodopa to dopamine outside the brain. Now as levodopa is in combination with carbidopa or benserazide the restriction is no longer necessary.

Vitamin E

An initial pilot study suggested that Vitamin E might delay the progression of Parkinson's, but a later more detailed study involving a much greater number of patients failed to confirm this [2].

Antioxidants

Oxidation is a normal process which occurs in all cells of the body. A substance produced from this process is known to cause damage and play a part in the development of diseases such as heart disease, cancer and Parkinson's.

Antioxidants (known as free radical scavengers) are a group of vitamins and minerals that can help lessen the damage caused by oxidation. Currently, there is no evidence that they will slow the progression of Parkinson's or increase the effect of drugs.

Again, providing you are consuming a well-balanced diet, your antioxidant vitamin intake will be covered. If you want to take additional antioxidant vitamins, e.g. A, C, and E, and/or have concerns, ask to see a registered dietitian via your GP or consultant. Taking excessive amounts of antioxidant vitamin supplements can adversely affect your health and wellbeing, and may interfere with your Parkinson's medication.

What about Co-Enzyme Q10?

Co-Enzyme Q10, which is naturally present in very small amounts in a wide range of foods, particularly protein foods, has potent antioxidant properties. Due to the lack of scientific evidence, it has been recommended that Co-Enzyme Q10 should not be used as a neuroprotective therapy.

Calcium and Vitamin D

Patients with Parkinson's are more likely to get osteoporosis (brittle bone disease). An adequate intake of calcium and Vitamin D is required to keep bones strong and healthy.

Calcium is found mainly in dairy foods such as milk, cheese and yoghurts, some tinned fish and fortified cereals and juices. It is important to have at least three portions of calcium containing foods per day. Vitamin D is needed to help absorb the calcium that is eaten. The main source of Vitamin D is from the sun via the skin. Older people, people who are housebound or may cover their skin when outside may have a particular need for extra vitamin D from their diet. Foods that are high in Vitamin D include salmon, margarine, eggs, liver, fortified milks and cereals. Try to include some high calcium and Vitamin D foods daily.

Acknowledgements:

Parkinson's Association of Ireland would like to thank Parkinson's UK for permission to use the PDS booklet "Parkinson's and Diet", which forms the basis for this leaflet. We would also like to thank Pauline Thomas, Dietitian at Tallaght Hospital, who contributed to this leaflet.

Other Relevant Information Leaflets:

NM1: Dry Mouth

NM2.2: Problems with Swallowing in Parkinson's disease

NM2.3: Problems with Eating and Drinking in Parkinson's disease

NM6: Bladder and Bowel Problems

For further information:

Irish Dietetic and Nutrition Institute (INDI)

Ashgrove House, Kill Avenue, Dun Laoghaire, Co. Dublin

Tel: 01-2804839. Fax: 01-2892353. Email: info@indi.ie Website: <http://www.indi.ie>

Irish Association of Speech and Language Therapists (IASLT)

P.O. Box 541, Ballinlough, Co. Cork

Tel: +353 (0)85 7068707. E-mail: info@iaslt.ie

Website: <http://www.iaslt.ie/>

References:

1. Govind T Vatassery, Timothy Bauer and Maurice Dysken (1999) 'High doses of vitamin E in the treatment of disorders of the central nervous system in the aged' American Journal of Clinical Nutrition, Vol. 70, No. 5, 793-801, November 1999© "<http://www.ajcn.org/content/70/5/793.abstract>" American Society for Clinical Nutrition
2. The DATATOP Study found that pharmacologic doses of vitamin E were not effective in the treatment of Parkinson's disease.
Vatassery GT, Fahn S, Kuskowski MA, The Parkinson Study Group. Alpha tocopherol in CSF of subjects taking high-dose vitamin E in the DATATOP study. Neurology 1998;50:1900-2.

DISCLAIMER – The information on these pages is not intended to be taken as advice. No changes to your treatment should be made without prior consultation with your doctor or allied health professional.

Parkinson's Association of Ireland

National Office: Carmichael House, North Brunswick Street, Dublin 7, Ireland.

Tel: 00 353 1 872 2234 **Fax:** 00 353 1 872 5540

Parkinson's Association of Ireland is a registered charity with limited liability.

Company Reg. No. 123532. Charity Reg. No. CHY 10816. Registered address as shown

G.8 March 2012