Parkinson's Australia

Parkinson's Disease Information Sheet 2.3
Nutrition and Parkinson's Disease

Idiopathic Parkinson's disease (Pd) is a progressive neurological condition which is characterised by motor (movement) and non-motor symptoms.

Adequate nutrition is vital to maintain health. This is particularly important while living with a chronic progressive condition such as Pd. Unplanned weight loss is a potential problem in Pd and may be associated with the following:

- Tremor
- Bradykinesia
- Fatigue
- Dysphagia
- Anosmia
- Fine motor changes
- Nausea
- Medication interactions
- Dyskinesia

Tremor

Tremor, which does not occur in all cases of Pd, results in an increased use of kilojoules (energy) which may exceed the daily kilojoules consumed. Therefore it will be necessary to increase intake. If upper limb action tremor is present, it may impact on the physical act of eating.

Bradykinesia

Bradykinesia (slowness) impacts greatly on eating. For this reason people with Parkinson's (PWP) frequently reduce the portion size of their meals leading to weight loss.

Fatigue

Fatigue is a major problem in Pd and will impact on meal preparation and eating. It is compounded by bradykinesia.

Dysphagia

Bradykinesia of swallowing related muscles can lead to delayed swallow and associated risk of aspiration (Information Sheet 2.2).

Anosmia

Approximately 90% of PWP will experience loss of sense of smell before motor symptoms of Pd are noticed. A decreased sense of smell impacts on taste sensation and will affect appetite and enjoyment of food. This may lead to weight loss.

Fine Motor Changes

Repetitive automatic skills such as chopping, cutting and whisking are frequently affected in Pd. This can impact on meal preparation. Also, the basic skill of hand to mouth action may be affected. These changes can lead to reduced dietary intake.

Nausea

When levodopa is introduced it may cause nausea, thus leading to weight loss. Initially, levodopa should be taken with meals. It is important to avoid anti-nausea medications, such as Maxolon, as this medication blocks the uptake of levodopa.

Medication Interactions

Dietary protein is broken down in the intestine into amino acids. These amino acids must cross the intestinal wall and subsequently the blood brain barrier to access the brain. Levodopa uses the same carrier system. Therefore, the presence of amino acids from protein may interfere with the absorption of levodopa. This does not affect all PWP.

Dyskinesia

Dyskinesia is the term given to involuntary movements which may result from extended use of levodopa. These movements can range from slight to severe. They will increase metabolism and may result in weight loss.

Strategies to Ensure Adequate Nutrition

- Tremor – the Pd tremor is usually present at rest therefore it may not be a problem when eating. An increased dietary intake will address the added energy requirement caused by ongoing tremor. Most PWP have a sweet tooth making added kilojoules enjoyable. Supplements such as Ensure® may be of benefit.

- Bradykinesia and fatigue – increased dietary intake taken in smaller, more frequent meals or 'grazing' pattern.

- Dysphagia – review by a speech pathologist to assess swallowing and the need for modified diet and liquids.

- Anosmia – loss of sense of smell may be overlooked. Add extra spices or flavourings if taste is affected.

- Fine motor changes – adapted cutlery and plates may be of benefit. Review by an occupational therapist is recommended.

- Medication interactions – PWP who experiencing 'on/off' fluctuations may benefit from adjusting protein intake times.

- Nausea – on commencement of levodopa it is recommended to take with food. Ginger products may assist in the management of nausea. NOTE: Maxolon should not be taken for the treatment of nausea in PWP.

- Dyskinesia – an increased dietary intake will meet the increased kilojoule demands. Supplements such as Ensure® may be of benefit. Medical management of dyskinesia may result in a reduction of levodopa.

In some cases it is difficult to ensure adequate nutrition through oral intake. This can be due to bradykinesia and/or swallowing difficulties. In these cases Percutaneous Endoscopic Gastrostomy (PEG) may be discussed. This involves insertion of a tube directly through the wall of the abdomen to the stomach to enable feeding by the use of specialised liquids.

A valuable resource on nutrition and Pd is *Eat Well, Stay Well with Parkinson's Disease* (2005). This is available Australia wide through the Parkinson's associations.