Current thinking on levodopa – a guide for patients
Parkinson’s disease (PD) is a progressive movement disorder in which your symptoms will change and evolve over time. PD is caused by the loss of cells that produce a chemical messenger called dopamine, which the brain needs to control muscles. The disease can affect everyone very differently and in some cases it may be many years before it causes any disability or limits your daily activities.

Some typical symptoms that people with PD can experience include tremor, stiffness or rigidity of the muscles, slowness of movement known as bradykinesia and problems with balance and coordination. Other symptoms that are not related to movement include sleep disturbances, depression, memory loss and difficulties with speech or swallowing.

Importantly, many of these symptoms can be improved with medication. There are many different types of treatment for PD including various forms of levodopa, dopamine agonists, monoamine oxidase inhibitors, anticholinergics and COMT inhibitors.

You will need to work closely with your PD specialist and PD nurse to find the right balance of medications to manage the symptoms of your disease effectively.
Almost all people with Parkinson’s disease will eventually need to take levodopa, even if they start off on a different medicine. There are many different types of levodopa medication, as well as therapies that can be taken alongside levodopa, to help control your PD symptoms.

Levodopa works because it is changed into dopamine when it reaches the brain. Therefore, it directly supplies the brain with more dopamine. Levodopa is usually prescribed with other drugs such as dopa-decarboxylase inhibitors (DDCIs) and sometimes COMT inhibitors, which prevent it from being broken down in the body before it reaches the brain.

Levodopa is very effective at preventing slow movements, stiffness and tremor.

Should you require any further information about levodopa, your medication or your condition, speak to your PD specialist or PD nurse.
Although levodopa is very effective at treating the symptoms of PD, as with all medications, there are potential side effects associated with its use. Some of the side effects of levodopa may disappear over time, while others may be improved by a reduction in dose. Medication can also be prescribed to help prevent any feeling of sickness.

Levodopa is normally very effective when it is first used in the treatment of PD. Symptom control is smooth and continued throughout the day. However, over time some people may begin to experience fluctuations in the way levodopa controls their symptoms. They may find that their PD symptoms begin to show again or become noticeably worse before it is time for them to take their next scheduled dose of medication. This return of symptoms is called wearing-off.

There are many ways to improve treatment with levodopa. These include rearranging the timing of drugs or switching to a different kind of levodopa preparation.

If you experience wearing off, it is important that you consult your PD specialist or PD nurse.
Although there is no cure for PD itself, the symptoms can be treated and there is a lot of research looking to find an effective cure and new treatments. As research is conducted, treatment practices for PD are continuously updated. It is important that you regularly discuss the treatment options available to you with your PD specialist and PD nurse, especially if you feel your PD symptoms are getting worse.

Unfortunately there have been conflicting messages about levodopa, which you may find confusing. This leaflet has been created to end some of the most common myths about levodopa and to provide you with an update on the current thinking in levodopa research.

Remember, if any of your PD symptoms change or get worse, it is important to talk to your PD specialist or PD nurse.
MYTH: levodopa is toxic in humans

FACT
There is a belief that levodopa may be toxic in humans; however, studies in humans have shown no evidence for levodopa toxicity. Furthermore, a recent study has suggested that levodopa may slow down the rate of the disease. More research is needed to clarify this issue.
FACT
There is no one particular medicine that is suitable for everyone with PD. In the past, common practice in the treatment of PD was to delay the prescription of levodopa as long as possible; however, along with other treatments such as dopamine agonists and MAO-B inhibitors, levodopa is now considered by the National Institute for Health and Clinical Excellence (NICE) to be suitable for the treatment of early stage PD.²
MYTH: levodopa treatment always leads to disabling motor complications

FACT
Levodopa is very effective in the treatment of PD symptoms and almost all PD patients will require it after a period of time. Low doses of levodopa can reduce the severity of dyskinesias (involuntary movements) and have been shown to be effective for several years.

With time and with disease progression, you may find that some of the symptoms that you experienced before starting levodopa return. There are, however, different doses and forms of levodopa and other therapies that you can take alongside your levodopa to help control your symptoms. Ask your PD specialist or PD nurse for more information.
There is a widely held belief that levodopa is not a suitable treatment for young PD patients; however, the NICE clinical guideline which covers PD patients over the age of twenty confirms that levodopa is suitable for the treatment of early PD whatever the age of onset.
TYTH:
levodopa is not the most effective treatment for PD

FACT
Many clinical trials conclude that levodopa is the most efficacious treatment for PD. If you are prescribed levodopa, you will need to work with your PD specialist or PD nurse to make sure that the dose you take is effective at controlling your PD symptoms.

Your PD specialist and PD nurse may need to increase or alter your levodopa dose or they may switch you to, or add in, another medication.
REFERENCES

3. NICE clinical guideline 35 (developed by the National Collaborating Centre for Chronic Conditions), Parkinson’s disease: diagnosis and management in primary and secondary care, 2006. URL: www.nice.org.uk
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