

# **I.T Systems to Support People with Parkinson's Disease**

## **Overview**

Parkinson's affects everyone differently. The symptoms someone might have and how quickly the condition develops will differ from one person to the next. So having a plan on maintaining IT independence and enabling continual connectivity can seriously help people stay connected and support the mental health of a person with Parkinson's disease.

## **I.T Perspective**

This condition means that a person's ability to use I.T and the need for different approaches through time will change. For many people, the condition can take years to progress to a point where it has a real impact on daily life. This is when assistive technology comes in.

## **How do symptoms progress and how does this impact a person's ability to use IT?**

The most common symptoms of Parkinson's are tremors, rigidity (stiffness) and slowness of movement. In the early stages, the use of a regular keyboard and mouse can still be possible and the best option for operating your computer, but as the condition progresses, and if the tremors or involuntary movement increases, a high level of frustration can pursue due to wrong keyboard strokes or being unable to align the mouse with part of the screen you are targeting.

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To aid in keyboard use, there are metal keyguards that fit over the keyboard with holes positioned directly over the keys. This allows users to be able to rest their hands on the keyboard without pressing anything

and also stop pressing the adjacent keys while typing. Tremors will also massively affect mouse usage and cause users to accidentally click the wrong thing but with the advances in assistive technology, this can be eliminated.

There are joysticks and even mouse adapters that feature technology that filters out tremors and allows for smooth mouse use. These options feature different strengths of anti-tremor filtering, allowing continual use as life progresses. Trackball mice are also favourable as they require less movement.

### Device Accessibility Options

Operating systems also now have a lot of accessibility features ranging from mouse pointer size to the speed and responsiveness of the mouse movement. These features can seriously improve a person's ability without additional cost.

### Assistive Software

Assistive software comprises of software that is helpful to lots of people, but can be particularly useful to disabled learners, such as dyslexic students or students with mental health difficulties and visual impairments. There are several types of assistive software including screen readers, text to speech, speech input and screen magnification software.

### Assistive Software for Parkinson's

In terms of benefiting people with Parkinson's, assistive software can massively improve computing experiences with products such as dictation software, text to speech, magnification and screen ruler software. Dictation software offers a rapid means of getting ideas onto the page, often much faster than typing, and is a good way to reduce typos. Word prediction software enables you to reduce the amount you need to type and also aids with spelling. Magnification and screen ruler software is great as it allows users to focus on specific parts of a page and not be overwhelmed by the number of words etc. It also makes it easier to see which reduces eye strain and fatigue.

### Speech and Parkinson's

Speech is another area that can be affected by Parkinson's over time and also vary day to day.

Communication and independence are important for many people and not being understood can cause frustration.

Voiceitt is an AI-powered speech recognition technology for people with non-standard speech to speak their mind and be understood. It translates their speech into standardised audio and text outputs for both in-person and virtual communication.

### Personalised language models based on unique speech patterns.

Voiceitt uses AI and machine learning models to build custom language models from the training phrases of each user's unique way of speaking. The technology interprets and converts speech to text, which can be used to write texts, emails, and communicate in person.

### Adapt-IT Training

Adapt-IT provides training in all of the main assistive software products. Training is beneficial to get the maximum out of your software and allowing you to effectively use it from the get-go rather than struggling to navigate your way around it for several hours. Our head trainer, Neil, has over 20 years' experience in assistive software training.

To find out more about Voiceitt and sign up for a free trial, visit:

[www.adapt-it.co.uk/voiceitt](http://www.adapt-it.co.uk/voiceitt)

or email:

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