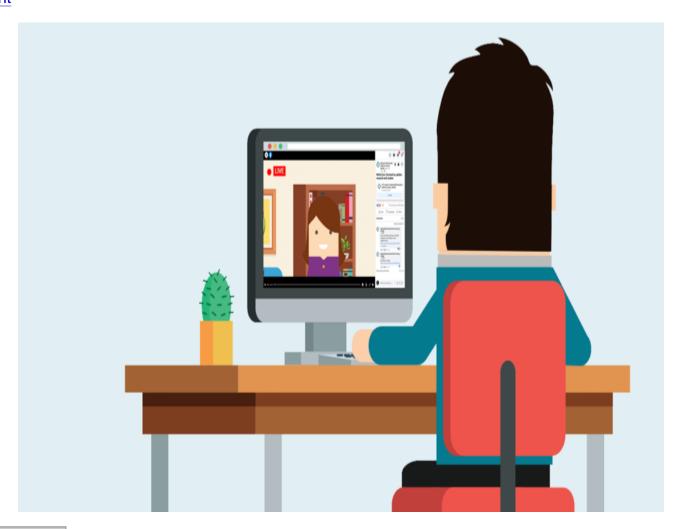


Article

Rheumatoid arthritis & computing

Many people with rheumatoid arthritis (RA) find using a computer for a long time painful. Use of a standard keyboard and mouse can be difficult, especially during a flare. This is why we have teamed up with AbilityNet to write this factsheet.

Print



At a glance

What sort of technology can help people with RA?

Some of the most common types of technology that can help people with RA to use computer technology are:

- Alternatives to a mouse
- Small, light, standard-layout keyboards
- Ergonomically* designed keyboards
- Word prediction
- Voice input now a reliable and well-developed technology
- * When something is 'ergonomically' designed, it is designed to be comfortable and effective for the user).

Examples

The solution to problems with using computers may depend on the tasks you need it for and on the setting you use it in. Here are some examples of how the technology you use can make using computer technology easier:

- Gel pads and/or mousepads
- Changing your mouse (e.g. a smaller mouse, vertical mouse, handshoe mouse, gaming mouse or rollerball/tracking mouse.
- Changing your keyboard (e.g. a bluetooth keyboard, low impact/low profile keyboard, compact keyboard or ergonomic keyboard.
- Learn keyboard shortcuts, to limit the amount of typing and clicking you need to do.
- Use keyguards, to stop you accidentally hitting letters multiple times.
- Use filter keys (a way to programme your computer to ignore brief or repeated key presses.
- Use sticky keys (if using Windows). This is a way to programme your computer to recognise 'modifier' keys ('Shift', 'Alt', 'Ctrl', etc), allowing you to do actions such as shortcuts without needing to keep these keys held down.
- Improve posture, making sure that everything is at the right level for you to sit with good posture, without straining.
- For tablets and mobiles, buy cover cases with inbuilt stands to avoid having to hold them for long periods, e.g. for video calls.
- Use dictation software, to avoid typing for long periods.

How AbilityNet can help you

AbilityNet is a leading authority on accessibility and assistive technologies. They can assist individuals, charities and employers by providing:

- Advice and Information
- Workplace assessments
- Consultancy services
- Volunteer Network to support individuals not at work or in education needing support with

accessing their technology

Visit the AbilityNet website at: www.abilitynet.org.uk

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How does RA affect computer usage?

The symptoms of RA can make using a computer, tablet or smartphone difficult. The degree to which people with RA may struggle with using a computer will vary. This is because of differences in the severity of symptoms and in which joints they occur.

The severity of RA symptoms can also vary from day to day. People with RA often experience 'flare ups' where their RA is particularly active. During a flare up, joints can become tender and swollen, making many everyday tasks harder to do.

The most common joints affected by RA are the finger joints. Other joints that are often affected by RA include the wrists, elbows, shoulders and neck.

Issues with using computer technology may include:

- Other conditions that are common complications in RA, such as carpal tunnel syndrome.
- Difficulty using a standard mouse or keyboard for long periods of time, due to wrist or finger symptoms.
- Problems with grip, making it hard to hold a tablet or smartphone for long periods.
- Variable symptoms and flares may mean that what works well one day may not the next.
- Difficulty sitting in the same position for long periods of time.

What sort of technology can help people with RA?

A person with RA may be able to continue with all or some of their computer use, by using a different technique.

We call this 'getting round the problem' and we have found it to be a very useful and under-used approach. Among the alternatives to try are:

- Alternatives to a mouse
- Small, light, standard-layout keyboards
- Ergonomically* designed keyboards
- Word prediction
- Voice input now a reliable and well-developed technology
- * When something is 'ergonomically' designed, it is designed to be comfortable and effective for the user).

For some time most desktop computers used a traditional mouse, keyboard and screen. Specialist alternatives to this often needed extra hardware or software. These added costs could be very expensive.

The good news is that the options today are very different. Laptops, tablets and smartphones offer a very affordable range of very flexible options. Unlike technology added to a desktop computer, they are not tied to a specific location.

In the past, powerful tools such as voice commands and dictation software came at an added cost. Now, they come built into all mainstream computer systems. More specialist solutions are often only needed as an add-on to options already built in.

One size does NOT fit all

AbilityNet supports thousands of people every year with different needs and preferences. Not everyone experiences the same level of pain or discomfort when using a computer. There is no ready-made solution available that would help everyone.

The solution to problems with using computers may depend on the tasks you need it for and on the setting you use it in.

Here are some examples of solutions to common problems people with RA may experience. We have based these examples on real computer users with RA.

Gel pads

A keyboard Gel Pad and/or mouse Gel Pad can help support your wrist when typing or using a mouse.?

Mouse

A smaller wireless laptop mouse (Logitech M187) can reduce wrist or finger strain. The smaller size can help your hand to rest on the mouse mat, keeping the wrist straight.

Clicking the mouse button can be painful, especially during a flare. Using a vertical mouse (where the buttons are on the side) can reduce strain on your fingers.

The handshoe mouse is often recommended to support the hand, wrist, and thumb. It allows the user to hold their arm at a relaxed 25-30 degree angle. It helps people who are struggling with grip, which

is common in RA.

The Corsair range of gaming mice (see Corsair M65) provides a thumb rest. This is usefu if pain when pain is worst in the base of the thumb and less so elsewhere.

A rollerball or trackball mouse minimises the amount you have to move your wrist when using a mouse.

Keyboards

Bluetooth keyboard for laptop

Laptop keyboards can be hard to use, putting your wrists at an uncomfortable angle. Connecting your laptop to a Bluetooth keyboard can help. Using a separate keyboard and mouse also enables you to move your laptop so that the screen is at eye level. This will give you better posture.

Low impact/ low profile keyboard

The keys on a low impact or low profile keyboard are not as high. This reduces strain on wrists and fingers.

Compact keyboard

Compact keyboards are smaller than a regular keyboard, with less keys. This makes them more portable and means you don't have to stretch as far to reach keys when typing.

Ergonomic keyboard

There are various designs of ergonomic keyboard. These keyboards reduce strain on fingers and wrists. If you are used to a standard keyboard set up, it may take you some time to get used to using them.?

Keyboard shortcuts

Microsoft keyboard shortcuts that you can use to perform actions faster. This minimises the amount you need to click with a mouse. It can take time to learn these, so you may find this slows you down at first. Over time, this will be less painful and quicker than using a mouse.

Common Microsoft keyboard shortcuts include:

Action	Shortcut
Save	Ctrl + S
Cut	Ctrl + X
Сору	Ctrl + C
Paste	Ctrl + V
Undo	Ctrl + Z

Redo Ctrl + Y
Print Ctrl + P
Bold Ctrl + B
Italic Ctrl + I
Underline Ctrl + U

An internet navigator keyboard can also help to reduce use of a mouse. These keyboards come with extra buttons, pre-programmed to do common internet browsing commands. These may include actions such as 'refresh', 'go back' and 'go forward'.

Keyguards

Stiffness and swelling can cause people to miss keys or hit the wrong key when typing. A 'keyguard' can help with this.

Keyguards have two main functions:

- 1. to provide a platform on which the user can rest their hands, without pressing keys down.
- 2. to make it difficult to hit more than one key at a time.

Before using a keyguard, try your computer's inbuilt software to enable 'filter keys' and/or 'sticky keys':

Filter keys

Filter Keys tell your computer to ignore brief or repeated key presses. This helps to prevent you from getting unwanted repeated characters when you type. These settings also allow you to set the time you would need to press a key for before it repeats.

Web link

AbilityNet article on filter keys

Click here to read more about filter keys on the AbilityNet website.

Sticky keys

The Windows operating system has a built-in feature to make the modifier keys ('Shift', 'Alt', 'Ctrl', etc) 'sticky'. This allows you to press one key at a time but your computer treats it as if the keys are being pressed together.

Web link

AbilityNet article on sticky keys

Click here to read more about sticky keys on the AbilityNet website.

Improving posture

The way that you sit when using a computer is also important for comfort and to reduce pain. Make sure that your chair is at the right height for you to comfortably reach the keyboard and mouse. To avoid neck strain, place your screen at eye level.

You can add a backrest to a chair or buy a chair with inbuilt lumbar support. You may also find a footrest helpful, especially when feet and ankles are flaring. An under-desk footrest is set at an angle that will keep your feet in a comfortable position.

Tablet and mobile phone

Tablet and mobile devices can be hard to hold upright for long periods. Buy cover cases with inbuilt stands, or use a separate stand to keep them in place. This reduces strain when having to hold the device upright for long periods, for example on a video call.

Dictation

Dictation software can be useful when typing is painful. There are various options in built-in and free to download software.

For use at work, you may need software that recognises industry-specific language. For example, someone working in a legal profession. For Microsoft, Dragon Professional has specialist dictionaries to help with this. It is worth noting that Dragon is no longer supported on the Apple platform. Spellex or Medincle are also good options.

How can AbilityNet help you?

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- Advice and Information
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- Consultancy services?
- Volunteer Network to support individuals not at work or in education needing support with accessing their technology?

My Computer My Way

My Computer My Way is an AbilityNet run website, packed with useful articles. These articles explain how to use built in accessibility features in your computer, tablet or smartphone.

The site gets updated as new features and changes are made to the Windows, MacOS, iOS, Chrome OS and Android operating systems. The site is broken down into the following sections:

<u>Vision</u> – computer adjustments to do with vision and colour

<u>Hearing</u> – computer adjustments to do with hearing, communication and speech

<u>Motor</u> – computer adjustments to do mobility, stamina and dexterity

<u>Cognitive</u> – computer adjustments to do with attention, learning and memory

Use it for free at mcmw.abilitynet.org.uk

Advice and information

Call: 0300 180 0028 Please note: calls to the AbilityNet helpline number cost no more than a national rate call to an 01 or 02 number. Calls to their helpline count towards any inclusive minutes in the same way as 01 and 02 calls. AbilityNet does not receive any money from these calls.

Email: enquiries@abilitynet.org.uk

IT support at Home

If you're looking for in-person support, you can book a free visit from one of our disclosure-checked volunteers. Many of our volunteers are former IT professionals. They give their time to help older people and people with disabilities to use technology to achieve their goals. Our friendly volunteers can help with most major computer systems, laptops, tablet devices and smartphones. www.abilitynet.org.uk/at-home

AbilityNet factsheets

AbilityNet's factsheets provide an extensive range of practical advice about specific conditions and the hardware and software adaptations that can help people of any age use computers to fulfil their potential.

All these resources are free to download from?www.abilitynet.org.uk/factsheets

Workplace Assessment Service

When it comes to computing solutions, one size does not fit all. AbilityNet believes that each case is unique and that individual attention is vital. Their Workplace Assessment Service integrates personal, technical and organisational considerations to arrive at sound and realistic suggestions, documented in a report.

To find out more about AbilityNet's Workplace Assessment Service, please visit? www.abilitynet.org.uk/workplace?or call 01926 465 247.

Consultancy services

AbilityNet's expert consultants are also available to assist employers who wish to take a broad, longerterm view in designing computer systems and associated work processes. Their experience and expertise can help you to achieve safe, healthy and productive working procedures. To find out more about AbilityNet's consultancy services, call 01962 465 247 or email? sales@abilitynet.org.uk

Volunteer Network

AbilityNet has a large network of volunteers who use their IT skills to help charities and disabled people based at home, who are not employed.

If you would like to request help from one of their volunteers to help you at home or within your charity, visit their Find a volunteer page:? www.abilitynet.org.uk/volunteering/finding-an-AbilityNet-IT-volunteer

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