# 

a player's guide to keep gaming

## ACKNOWLEDGEMENT

This project would not have been possible without the **collaboration**, **generosity**, and **dedication** of the MND community.

**MND** Australia and **MND** Queensland worked in partnership to develop this resource, ensuring that people living with MND have the tools and knowledge to continue gaming for as long as possible. We extend our deepest gratitude to **FightMND**, whose funding made this project a reality.

Early research was carried out in collaboration with researchers from Victoria University, the University of Melbourne and Swinburne University of Technology. We thank them for their efforts. A driving force in this work was the late Dr Kirsten Harley, a passionate researcher, advocate and person living with MND. Her insight, energy and deep commitment helped elevate the recognition that gaming could meaningfully improve quality of life for people with MND. This resource builds on those foundations, transforming research into practical, lived-experience-informed support. Dr Harley's legacy continues to shape and inspire everything this project represents.

A special thank you to the **people living with MND** who generously shared their experiences through surveys and focus groups. Your insights have shaped this guide, making it practical, relevant, and truly reflective of the gaming community. We also acknowledge the **allied health professionals** who contributed their expertise, helping to ensure that the strategies and recommendations in this book are both effective and achievable.

Finally, we recognize the **strength**, **resilience**, and **passion of the entire MND community**—a community that continues to support, uplift, and advocate for one another.

Gaming is for everyone, and together, we are ensuring that it remains accessible for all.

- MND Australia

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## FOREWORD

Gaming is more than just entertainment. It's a way to **connect, explore, challenge yourself, and stay engaged** in something you love. Whether you've been gaming for years or are just starting, this e-book is here to help you **continue enjoying video games, even as your needs change due to motor neurone disease (MND)**.

There is growing evidence that gaming has cognitive, social, and emotional benefits for people with disabilities and neurodegenerative conditions<sub>1</sub>. Studies have shown that video games can enhance problem-solving, mental agility, and even emotional well-being<sub>2</sub>. The social aspect of gaming is particularly powerful, with research indicating that online games help combat social isolation and provide meaningful interactions<sub>3</sub>.

However, as physical challenges arise, gaming can become frustrating without the right tools. The good news is that **gaming is more accessible than ever before**. From adaptive controllers to eye-tracking technology, voice commands, and in-game accessibility settings, there are more ways than ever to keep playing.

This e-book is designed to be a **practical**, evidence-based resource that will help you:

- Understand the latest accessibility features in games and consoles
- Explore adaptive gaming hardware that can make playing easier
- Learn strategies to stay comfortable and manage fatigue while gaming
- Discover support networks and funding options that can help you access adaptive gaming tools

Gaming should be for everyone. This guide will empower you with **knowledge, tools, and support** so that you can **keep playing, stay connected, and enjoy the worlds you love.** 



## Let's press start on this journey together.



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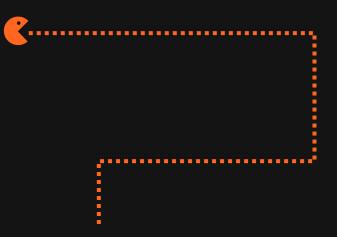
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# PART 1

## **The Beast Vs The Game**

## MIND AKA "THE BEAST"

Motor neurone disease (MND) is a **progressive neurological condition** that affects the nerve cells (motor neurons) responsible for controlling voluntary muscles. As these neurons degenerate, it leads to **weakness**, **loss of movement, and difficulties with speech and breathing**<sub>4</sub>. It truly is a beast of a disease. While MND affects each person differently, its progressive nature means that everyday activities — including gaming, can become more challenging over time. What may feel easy today could require adaptations tomorrow, and staying ahead of these changes is key to maintaining independence and enjoyment.

If you're reading this book, it's because gaming is **something you love** — whether it's a way to unwind, stay connected with friends, challenge your mind, or escape into another world. The good news is that you **don't have to stop gaming just because your abilities change.** The gaming industry is evolving, and accessibility solutions are improving every year — ensuring that **everyone, including those living with MND, can continue to play.** 

People with MND spend a large proportion of time feeling isolated and lonely. It's difficult to feel like you have accomplished anything given mobility and communication difficulties. Try staying in a positive mindset given those obstacles (on top of a debilitating medical condition). Gaming helps bridge loneliness and lack of community issues - that makes it an invaluable life aid for me. Did I mention I can RUN in games! 'Nuff said.'

- Survey Participant - Game On Survey (2025)

## WHAT IS GAMING?

Gaming has **evolved significantly** over the decades. Traditionally, it has been defined as **playing video games on a console, PC, or arcade system** — interactive digital experiences that require **skill, strategy, and often fast reflexes**. Early games like *Pac-Man, Tetris,* and *Doom* shaped the foundation of what people considered '**gaming**'<sub>5</sub>. However, today's **gaming landscape is much more diverse**, incorporating a range of play styles and **accessibility features** that allow **more people than ever** to engage in gaming<sub>2</sub>.

#### The Many Ways to Play

Gaming now takes many forms, each offering a unique experience:

- **Console Gaming** Playing on platforms like PlayStation, Xbox, or Nintendo, often using a handheld controller connected to a TV.
- **PC Gaming** Using a computer to play high-performance esports titles, strategy games, or casual experiences.
- **Mobile Gaming** Games played on smartphones and tablets, often designed for short, accessible play sessions.
- Cloud Gaming Streaming games over the internet, reducing the need for expensive hardware.
- Virtual Reality (VR) and Augmented Reality (AR) Gaming Immersive experiences using motion tracking and headsets.
- Social and Casual Gaming Games played through social media, web browsers, or messaging platforms.

The gaming industry has seen a **shift away from traditional gaming formats towards more accessible, on-the-go experiences, particularly mobile gaming**<sub>6</sub>. This shift is highly relevant to people living with MND, who may find handheld controllers or fast-paced gameplay increasingly difficult over time.

## THE BEAST VS THE GAME

Unlike some other disabilities, where a one-time adaptation may be sufficient, **MND requires ongoing refinements to accessibility solutions as physical abilities change over time**.

Research shows that:

- Over 35% of people with MND experience upper limb weakness as their initial symptom and the majority of people with MND will experience progressive upper limb weakness, affecting tasks that require fine motor control, such as using a game controller or keyboard<sub>7</sub>.
- Fatigue and energy management are major challenges, with studies indicating that people with MND experience significantly increased muscle fatigue during repetitive tasks<sub>8</sub>.
- Cognitive and speech changes can affect reaction times, multitasking ability, and in-game communication<sub>9</sub>.

According to the *Game On with MND* survey conducted by MND Queensland in 2025:

- 70% of respondents experience physical or mental fatigue that affects their ability to game for extended periods.
- 57% have experienced challenges communicating with others during gaming due to speech difficulties.
- 39% reported that MND has impacted their ability to focus, react quickly, or strategise while gaming.

These challenges can be frustrating, but they don't have to be a barrier. With the right adaptive tools, accessibility settings, and ongoing refinements, gaming can remain an enjoyable and meaningful activity for as long as you want to play.

Let's take a closer look at how MND affects the body — and what that means for gaming

#### **Cognitive Changes**

Difficulties with processing speed and executive function, making fast-paced games more challenging<sub>9</sub>

#### **Changes in speech**

Affecting multiplayer communication or voice command functionality<sub>10</sub>

#### Fatigue & energy management

Shorter gaming sessions or needing a more ergonomic setup to prevent strain<sub>11</sub>

#### Reduced arm mobility

Difficulty reaching controls or using joysticks as muscle weakness progresses<sub>12</sub>

#### Decreased hand strength & dexterity

Making it harder to press buttons, hold a controller, or use a mouse/keyboard<sub>13</sub>

## THE POWER OF GAMING

Gaming is often seen as a simple pastime — a way to pass the time and entertain oneself. But for people living with **motor neurone disease** (MND), gaming is far more than that. It is a **lifeline to connection**, **mental engagement**, and **independence**. When mobility becomes more difficult, communication becomes strained, and the ability to participate in hobbies diminishes, gaming remains a **powerful tool for maintaining quality of life**.

Let's explore how gaming can help people living with MND stay socially connected, keep their minds active, experience a sense of achievement, and manage emotional well-being. We will also highlight real experiences from the MND community, using survey insights and external research to demonstrate why gaming is not just entertainment — it's a vital part of life.

Gaming allows me to keep up with my friends even though I can't go out as much anymore. It's become my social life.

- Survey Participant - Game On Survey (2025)

## A SOCIAL CONNECTOR

As MND progresses, **physical interactions can become more challenging**, making traditional social activities — such as going out to meet friends, attending events, or even casual conversations — more difficult. However, gaming **bridges the gap** by providing a **virtual space to interact, compete, and collaborate**. For many, gaming isn't just about playing games — it's also about the broader **gaming culture**. Many people engage with gaming by watching livestreams, participating in forums, or discussing games with others, even if they are not actively playing.

According to the Game On with MND survey:

- 43% of respondents play video games daily, while 9% play weekly, demonstrating that gaming remains an important social activity.
- Several respondents noted that gaming allowed them to **stay connected with family and friends**, even when they could no longer participate in other activities.

## FILLING THE VOID

For many people, work provides **structure**, **purpose**, **and daily routine**. However, many individuals with MND are forced to leave employment earlier than expected, leading to a loss of routine and a sudden increase in unstructured free time. In the *Game On with MND* focus group, participants shared that they turned to gaming as a way to fill the gap left by work, providing them with a **sense of engagement**, **focus**, **and daily accomplishment**.

In this way, gaming can act as a **meaningful occupation**, offering **mental engagement, structure, and progression**. Just like work, games can provide **goals to work toward, problems to solve, and social interactions**, helping to ease the **transition from employment to a new daily routine**.

Gaming is **not just a hobby** — it can be a **structured**, **meaningful way to stay engaged** when traditional work is no longer possible.

## STIMULATING THE SYNAPSES

Many games challenge the brain in ways that **help maintain cognitive function**, which is crucial for people with MND. Research has shown that video games can **enhance memory**, **problem-solving skills**, and **reaction times**<sub>14</sub>. Additionally, studies indicate that **cognitive training through gaming may improve executive function and multitasking abilities**, particularly in older adults and those with neurodegenerative conditions<sub>15</sub>.

In the Game On with MND survey:

- 39% of respondents noted that MND had impacted their focus, reaction time, or ability to strategise while gaming.
- Many players have adapted their gaming habits by switching to **turnbased games, puzzle games, or slower-paced strategy games** to continue playing effectively.

## A SENSE OF ACHIEVEMENT

For many, MND can create a feeling of losing control over everyday activities. Gaming provides an environment where **players remain in charge** of their actions and progress. Whether it's **completing a level, mastering a skill, or exploring a vast open world**, video games offer **a sense of achievement that remains unaffected by physical limitations**<sub>16</sub>.

## RELEASE THE ENDORPHINS

Beyond entertainment, gaming has been shown to **reduce stress**, **anxiety**, **and depression**<sub>17</sub>. Many participants in the *Game On with MND* survey highlighted that gaming provides a **mental escape from the realities of MND**, offering moments of **relaxation and enjoyment**.

Gaming helps me escape reality for a while. I don't need to walk to game, so I don't fatigue the same way or get frustrated.

- Survey Participant - Game On Survey (2025)

For some, gaming is a safe space where **physical limitations don't define their experience**. Even when day-to-day activities become difficult, gaming allows them to **feel capable**, **in control**, **and engaged**. The ability to **set goals**, **accomplish tasks**, **and interact with others** provides an important **boost to self-esteem and mental well-being**. Motor neurone disease might change the way your body works, but it **doesn't change who you are** — or the **things you love.** For many people, gaming remains a **powerful source of connection, purpose, relaxation, and enjoyment**, even as the disease progresses. As we've explored in this chapter, MND presents unique and evolving challenges to how we play — from reduced mobility and fatigue to changes in coordination and speech. But thanks to ongoing innovation in game design, adaptive technology, and accessible tools, there are more ways than ever to stay in the game.

We've also learned that people with MND are already adapting. From choosing slower-paced games or switching devices, to asking family for help with setup or exploring accessibility features, your creativity and resilience are at the heart of what keeps gaming possible. The key takeaway? You don't have to stop — you just might need to play differently.

With the right knowledge, tools, and support, gaming can continue to be something that brings you joy, connection, and freedom. The next chapters will help you figure out how.



# CORRESPONDENCES

## Hacking the Environment

## THE POWER OF THE SETUP

Whether you're gaming on a **console, computer, tablet, or phone**, the way you position yourself — and the way your body responds — can have a **huge impact** on your comfort and ability to keep playing. For people living with MND, small changes in your gaming setup can make the difference between ten minutes of frustration and an hour of satisfying play.

This chapter explores the real-life ergonomics of gaming — that is, **how your body interacts with your environment while you play**. Ergonomics is about **fitting the task to the person**, not the other way around. By understanding how different devices and positions affect posture, pressure, movement, and fatigue, we can make gaming more comfortable, sustainable, and safe.

Research shows that poor ergonomic setups can contribute to musculoskeletal discomfort, fatigue, and pressure-related injuries, particularly in people with reduced mobility<sub>9,18</sub>. This is especially relevant for people with MND, where muscle weakness and fatigue are progressive and highly individualised<sub>11</sub>.

It's important to remember, that no two people are the same; and therefore your gaming setup should be adjusted to you!



## GOOD POSTURE FOR THE WIN

#### **CONSOLE & CASUAL GAMING**

Most people playing **consoles** such as Xbox and Playstation, or using a **tablet or phone**, will game in a relaxed seat such as a lounge chair, recliner or bed. Whilst these may be comfortable in the short term, they can promote **slouching**, **poor neck posture**, and **leave your arms unsupported**.



## FOR CONSOLE & CASUAL GAMING

Use a **lap tray** or **arm support cushion** to rest the controller or device on to avoid arm and hand fatigue.

Place a **lumbar support pillow** behind your lower back.

Try to have the TV or screen at a **comfortable eye level** so you aren't straining your neck looking up or down.

Position yourself **straight in front of the TV or screen** to avoid awkward and sustained neck postures.

Reclining? Use **pillows under your arms** for support.

Got a Tilt-in-space wheelchair? You may find that staying in your wheelchair, using the tilt-function and its pressure relieving properties may be more comfortable to play in (and reduce fatigue in transferring in and out of the chair).

#### PC GAMING

PC Gamers often have comprehensive gaming setups and gamers usually have good control over their posture. However, sitting at a desk to game can involve **rigid sitting and unsupported posture** over time.

A typical PC gaming setup will often include:

- Desk or Table
- Gaming Chair
- Monitor (or multiple monitors)
- Keyboard
- Mouse
- Headset

With this level of equipment, customisation and adjusting for ergonomics is often much more possible than console gaming.

Let's look at each piece of equipment and tips to help you achieve comfortable gaming!



## FOR YOUR DESK

- Consider an adjustable height desk everyone has different body proportions and so buying a fixed height desk will limit your ability to easily adjust the desk to you. An adjustable height desk will allow you to game from different types of seating such as a wheelchair and enable adjustments in positioning as needed into the future.
- If an adjustable desk isn't an option, maybe a desk riser is the solution? It is also possible to buy special blocks for desks to be safely put on to raise the height.
  - Your desk should roughly be at elbow height when you are sitting with good posture.
  - Make sure that your feet are fully supported under your desk if they aren't, use a footrest for support. This reduces fatigue in maintaining your posture.



Gaming chairs have become common in esports and home setups alike. They are typically designed in the style of a racing car seat - featuring a high backrest, bucket-style sides, and flashy colours. Some may even have LED lights, music, and massage functions! Whilst they look good and often have great adjustability, they aren't essential when gaming. When looking for a chair, look for the following:

- Adjustable lumbar support (either built in or via a lumbar cushion) to help support a neutral posture and to reduce slouching.
- Height adjustability to enable you to select the best height; considering both upper and lower limb support.
- Arm rests whilst gamers will often rest their arms on the desk, having arm rests provides you an alternate option to reduce the strain on the upper limb muscles.
- High back and head support to help facilitate posture and reduce neck muscle strain.
- Chairs that have the ability to recline also enable you to adjust your weight and take the load off your postural muscles; meaning you may be able to game for longer.



### FOR YOUR MONITOR

The top of your screen should be at eye level or slightly below so that you can view the screen with a gentle downward gaze.

If reclining, you may need to lower your monitor slightly to maintain that eye-level relationship.

For multiple monitors, place the primary display centred and close to eye level and arrange secondary monitors adjacent at a similar height to avoid neck twisting.

The monitor should be positioned about an arm's length away from your face to prevent neck strain and eye fatigue.

Try tilting your monitor back (10-20 degrees) so the bottom is a bit closer to you than the top - this helps manage glare and can also help prevent eye fatigue.

Also consider adjusting monitor brightness and enable blue light filtering or "night mode" to reduce harsh light. This will also help with eye strain and fatigue.



Your keyboard should be positioned directly in front of you to avoid twisting your body. The keyboard should lie flat or at a slight negative tilt (lower in the back) to keep your wrists neutral.

Your mouse should be on the same surface as your keyboard and to the side of the keyboard.

These changes keep your arms resting comfortably against your sides and able to be supported by the desk.

## SETUP CHEAT CODES

Everyone is different so there is **no one-size-fits-all approach** to gaming setups and modifications. Getting the best setup for you may take some time, creativity, and trial and error; especially considering that your MND will progress over time, as too will your posture and ability to move.

For this reason, **adjustable equipment such as desks and chairs** will give you the best ability to cater for your changing needs.

Understanding ergonomics is a **specialty skillset.** Your allied health professional team can support you in assessing your gaming setup, and will be able to make recommendations on adjusting the environment, and potentially special equipment to help make gaming easier.

Even with the best of setups, it is important to remember to take regular rest breaks and listen to your body! If you are experiencing pain, fatigue, cramping, or any other unwanted symptoms, it is important not to ignore it! Instead, raise it with your allied health professional team who will be able to offer practical tips and strategies to manage these symptoms before they stop the game!





# PART 3

## Power Up Your Game

## KEEPING YOU IN THE GAME

As MND progresses, changes to strength, dexterity, speech, and posture can start to interfere with the physical demands of gaming. Fortunately, the world of **accessible gaming hardware and adaptive technology** has advanced significantly, opening up powerful new ways for people to continue playing the games they love.

This chapter dives into the world of accessibility menus, **adaptive controllers, input devices, software, and tools,** that can help overcome barriers and restore independence in gaming.

Accessible hardware is designed to **reduce the physical effort required to play games**. Whether it's a controller that can be operated with one hand, a joystick you move with your chin, or a button that activates with a light tap of the foot, there is no one-size-fits-all. The key is finding the right tool for your needs.

Research shows that using adaptive technologies can significantly improve quality of life for people with disabilities by restoring leisure participation, autonomy, and social interaction<sub>19-20</sub>.





## IN-GAME ACCESSIBILITY

As part of the Game On Project, we asked people living with MND about their knowledge of available accessibility options on their preferred gaming devices. Perhaps unsurprisingly, most didn't know anything about what their device or the games they play had in terms of in-game accessibility.

A lot of games already have **built-in features** to make playing your favourite games easier! It's simply a matter of knowing where to look.

Some relevant **accessible features** that you might be able to adjust include:

**Text-to-Speech functionality:** Converting text into spoken words.

**Customisable controls:** Allowing you to remap controls and adjust input sensitivity.

**Difficulty Settings:** Offering different difficulty levels to accommodate players of varying skill levels.

**Assist Modes:** Providing assistance with certain tasks such as combat or navigation.

**Co-Piloting:** Allowing multiple players to share control of a single character or vehicle.

**Skip Options:** Allowing players to skip cut-scenes or dialogue.

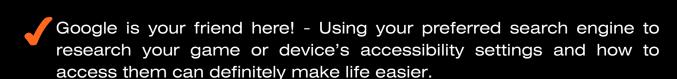
Simplified User Interface: Helping to make the game interface easier to navigate.

With more people than ever before enjoying gaming in some capacity, there is increasing pressure on both hardware and software developers to consider how they can make their games more **accessible for everyone.** 



Whilst it would be great to include how to access accessibility settings for every device and game, the reality is that it **isn't that simple.** Every game and device will have their own **unique layouts and interfaces** are **changing constantly**.

Navigate to the device or game's Settings Menu - look out for sections labeled "Options" or "Accessibility" or look out for this icon.



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Use some of the resources shared later in this guide (Part 4)

#### Did you know?

The Accessible Game Initiative was launched to help standardise "tags" for accessibility to make it easier for consumers to identify accessibility features of available games. All of the big game developers, including Sony, Microsoft, and Nintendo have all committed to participating in the initiative to make gaming available to all!

## PLAYSTATION ACCESS

This unique, space-ship shaped controller was launched by Sony in 2023, with flexibility in mind. Key accessibility features include:

Swappable button types for comfort and user preference

Joystick swapping

Custom button mapping

Compatible with third-party accessories (i.e. switches & buttons)

Mounting capability (can be mounted onto a wheelchair with an appropriate bracket etc - your Occupational Therapist can help here)

Custom profiles to support different game preferences

Can be used in isolation, two at once, or with a standard controller - giving you maximal flexibility

An easy setup menu that automatically opens on screen when the device is connected into the PlayStation console.

Affordable to purchase - whilst more expensive than a standard controller, it isn't much more than the cost of a new release PlayStation game.



## **LEARN MORE**

#### WATCH THE PRODUCT TRAILER - PLAYSTATION ACCESS CONTROLLER

#### https://www.youtube.com/watch?v=3KUmHFU51NU



#### ACCESS THE DIGITAL SUPPORT RESOURCE

#### https://www.playstation.com/en-au/support/hardware/accessories

I could see that having two of these plus the switch accessories would make a formidable setup for the disabled.

Person with MND who trialled the Controller

## XBOX ADAPTIVE CONTROLLER

Developed by Microsoft in partnership with disability organisations, the XAC is a customisable hub that allows gamers to connect a wide variety of switches, buttons, joysticks, and other devices to customise their gaming setup. Key features include:

#### For use with Xbox and PC

All functions from a standard controller have their own "port" and can have a compatible switch, button, or joystick connected via a 3.5mm jack and USB connection.

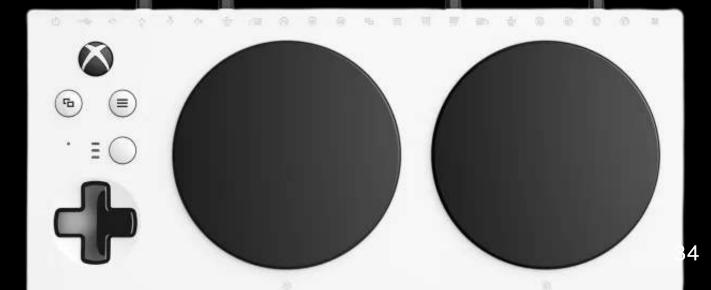
Large programmable buttons

Compatible with third-party accessories (i.e. switches & buttons)

Mounting capability (can be mounted onto a wheelchair with an appropriate bracket etc)

Can be used in isolation, or with a standard controller - giving you great flexibility

Affordable to purchase - whilst more expensive than a standard controller, it isn't much more than the cost of a new release Xbox game.



## **LEARN MORE**

#### WATCH THE PRODUCT TRAILER - XBOX ADAPTIVE CONTROLLER

https://www.youtube.com/watch?v=9fcK19CAjWM



#### ACCESS THE DIGITAL SUPPORT RESOURCE

https://support.xbox.com/en-US/help/account-profile/accessibility/xbox-adaptive-controller

## SWITCHES, BUTTONS & ADD-ONS

Both the Playstation Access Controller and the Xbox Adaptive Controller have the option to add extra buttons, switches, joysticks and triggers to help adjust to your unique circumstances.

These aren't included with either device and need to be purchased separately.

## LOGITECH

Logitech has gaming kits designed for each platform (Xbox or PlayStation).

NOTE: They aren't interchangeable, so make sure you buy the correct one!

The kits contain a mixture of large and small

buttons, pedals, and switches to enable you to connect them into the relevant controller. They also include labels so you can label each button and remove the need to remember what each one does! The kits also include velcros and a mat to enable the buttons and switches to remain in position when they are where you want them!

LEARN MORE

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Click the relevant platform below to see Logitech's switch set for that device.



## XBOX ADAPTIVE J04STICK

Xbox has recently released its adaptive joystick.

With button remapping, multiple controller profiles available, interchangeable ball and stick ball options through 3D print files, and its ability to be connected directly to the console or PC, it gives gamers a great extra device to aid how they play games!



#### WATCH THE PRODUCT TRAILER - XBOX ADAPTIVE JOYSTICK

https://www.youtube.com/watch?v=tPtVsZ-ix9s

Getting Started with the Xbox Adaptive Joystick

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## ALTERNATIVE INPUTS

Whilst it is impossible to provide an exhaustive list of every available alternative input, for people living with MND, there are a couple of key options that should be considered.

As we start getting into complex systems and technology, these devices are far more expensive and often require prescription and set up support via your Allied Health team. This will likely include your Occupational Therapist in the first instance, and potentially your Speech Pathologist

#### Gaming with Eye-Gaze

We are seeing an emergence of eye-gaze capability, with Apple recently launching eye-gaze on their devices<sub>21</sub> which can be accessed via the device accessibility menu.

People living with MND may switch to eye-gaze control as their arm and hand muscles become weaker. Tobii Eye Tracking system is one of the most popular consumer options for Eye Gaze technology and they have been working hard in the gaming space to support increased accessibility to gaming.

**LEARN MORE** 

SUBSCRIBE TO THE TOBII GAMING YOUTUBE CHANNEL

https://www.youtube.com/@TobiiGaming

#### CHECK OUT TOBII GAMING'S WEBSITE AND RESOURCES

https://gaming.tobii.com

tobii

## AIDS & MOUNTS

As we start to embark down the path of more specialised and adaptive hardware solutions, we need to consider how they will be attached, positioned, and mounted to help ensure they can be ergonomically positioned to support your gaming.

Whilst in some cases, off the shelf products like pillows, stands and aids might help, it is highly likely that you may benefit from more customisable support over time.

Your allied health team (in particular, your Occupational Therapist) will be able to help you identify ways to best mount your controllers, buttons and switches in a way that best works for you; preventing risk of unwanted symptoms like fatigue, pain, and cramping.



## PART 4

GameMasters

## ALLIED HEALTH: THE REAL LIFE MPCS

Non-Player Characters (NPC's) provide information, quests or items to a player, guiding them through the game. They can make the game world feel more alive and realistic. Just like NPC's, allied health professionals can make playing the game more enjoyable; helping provide valuable information and strategies to keep you gaming comfortably for longer!

Interestingly, during the *Game On* project, we explored whether or not people with MND had worked with their allied health team on gaming. The vast majority hadn't, and when we discussed this further during focus groups, people felt it perhaps wasn't as much of a priority for professionals when compared to some of the other challenges they faced.

On the flipside of this, we spoke to Allied Health Professionals about gaming and the majority said that they would be able to impact on this and do explore hobbies and leisure as part of their assessment and therapy processes.

So the takeaway message here is:

### If Gaming is important to you, it is important to your allied health team!





## PHYSIOTHERAPY

Physiotherapists can assess physical limitations, recommend strategies to reduce discomfort or fatigue, and create stretching or exercise programs to manage cramps, stiffness, and reduced mobility.

They may also help with:

Conducting **ergonomic assessments** of your gaming setup and making recommendations to improve your environment to help you **game for longer and more comfortably**.

Improving **seated posture** for longer gaming sessions, including making recommendations on seating options, and supporting posture with braces, bolsters and padding.

Preventing or **managing musculoskeletal pain**, cramping, and contractures.

Advising on **positions or movement strategies** that reduce effort and can minimise fatigue.

Prescribing **aids and equipment** to support joints that are affected by muscle weakness.

Collaborating with occupational therapists on optimal gaming setups.

## OCCUPATIONAL Therapy

Occupational therapists (OTs) are **experts in enabling participation** so it's no surprise they can be powerful allies in helping people with MND continue to game. Whether it's **modifying your environment**, **adapting equipment**, **or exploring assistive technology**, OTs help ensure gaming remains a meaningful and accessible activity.

An OT can support gaming by:

- Assessing how your current setup supports or limits function
- Recommending adaptive equipment like lap trays, mounts, or controllers
- Supporting applications for funding (e.g., NDIS Assistive Technology)
  - Providing strategies to reduce fatigue or prevent discomfort
  - Helping **customise controls or interfaces** to suit changing abilities, including helping with mounting switches and controllers.

From early-stage adjustments to advanced adaptations, occupational therapy ensures your setup evolves with you—so you can keep enjoying the games you love.

## SPEECH PATHOLOGY

Speech pathologists do more than support communication—they can help people with MND **stay connected and engaged through gaming**. As speech changes occur, it can become harder to communicate with others during multiplayer games or to use voiceactivated tools and commands.

Speech pathologists can assist with:

- Supporting the use of voice control software and speech-to-text tools
  - Recommending augmentative and alternative communication (AAC) options for in-game chat or social interaction
- Helping maintain effective communication strategies for online or cooperative play
- Advising on voice banking and message banking for personalised ingame expression
- Collaborating with tech teams and OT's to integrate communication supports into gaming setups



## ACCESSIBLE GAMING RESOURCES

This guide has been developed to help people with MND keep gaming; providing useful information and resources and pointing you in the right direction to find additional information.

As the technology space continues to innovate, here are some great resources that we recommend for you to help you stay up to date on how to keep gaming with MND.



#### Able Gamers Foundation

UK based organisation - Provides assistive technology, consultation, and peer support to improve accessibility in gaming for people with disabilities.

https://ablegamers.org



#### **Accessible Games Initiative**

Aims to improve players' gameplay experiences by providing clear information about the accessibility features available in video games. https://accessiblegames.com/



## CAN I PLAY THAT?

#### **Apple Accessibility**

Apple's dedicated page highlighting accessibility features across its devices. https://www.apple.com/au/accessibility/

#### Can I Play That?

Publishes accessibility reviews, commentary, and resources on video games, written by disabled gamers and accessibility specialists. https://www.caniplaythat.com



#### Game Access Blog

SpecialEffect's blog on game settings, accessible equipment & software. https://gameaccess.info/



#### **Microsoft Accessibility**

Microsoft's dedicated page highlighting accessibility features across its devices including PC and XBox.

https://www.microsoft.com/enus/accessibility



#### **PlayStation Accessibility**

PlayStation's dedicated page highlighting accessibility features on the PlayStation device. https://www.playstation.com/enau/accessibility/



#### **Reddit: r/DisabledGamers**

An online discussion forum where gamers share accessibility tips, equipment advice, and personal experiences related to gaming with disabilities. https://www.reddit.com/r/disabledgamers



#### SpecialEffect

A UK based organisation that supports people to support gamers through customised gaming setups, clinical input, and education to support people with physical disabilities in accessing video games.

https://www.specialeffect.org.uk/

### REFERENCES

1. AbleGamers Foundation. (n.d.). The benefits of playing video games for people with disabilities. AbleGamers. <u>https://ablegamers.org/the-benefits-of-playing-video-games-for-people-with-disabilities/</u>

2. Granic, I., Lobel, A., & Engels, R. C. M. E. (2014). *The benefits of playing video games*. American Psychologist, 69(1), 66–78.

3. Kowert, R., Domahidi, E., & Quandt, T. (2014). *The relationship between online video game involvement and gaming-related friendships among emotionally sensitive individuals.* Cyberpsychology, Behavior, and Social Networking, 17(7), 447–453.

4. Rowland, L. P., & Shneider, N. A. (2001). *Amyotrophic lateral sclerosis*. New England Journal of Medicine, 344(22), 1688–1700.

5. Kent, W. (2001). *The ultimate history of video games: From Pong to Pokémon and beyond*. Three Rivers Press.

6. Statista. (2023). *Number of video gamers worldwide from 2015 to 2023*. Retrieved from <u>https://www.statista.com</u>

7. Müller, H.-P., Ludolph, A. C., Kassubek, J., & the German ALS Study Group. (2023). Clinical spreading of muscle weakness in amyotrophic lateral sclerosis. Journal of Neurology.

8. MND Australia. (n.d.). Fatigue and insomnia. Retrieved May 18, 2025, from https://www.mndaustralia.org.au/mnd-connect/for-healthprofessionals-service-providers/managing-symptoms/fatigue-andinsomnia

9. Goldstein, L. H., & Abrahams, S. (2013). *Changes in cognition and behaviour in amyotrophic lateral sclerosis: Nature of impairment and implications for assessment.* The Lancet Neurology, 12(4), 368–380.

10. Tomik, B., & Guiloff, R. J. (2010). *Dysarthria in amyotrophic lateral sclerosis: A review*. Amyotrophic Lateral Sclerosis, 11(1–2), 4–15.

11. Hobson, E. V., & McDermott, C. J. (2016). Supportive and symptomatic management of amyotrophic lateral sclerosis. Nature Beviews Neurology, 12(9), 526–538.

12. MND Australia. (n.d.). Types of motor neurone disease (MND). Retrieved May 18, 2025, from <u>https://www.mndaustralia.org.au/mnd-connect/what-is-mnd/types-of-mnd</u>

13. ALS Association North Carolina Chapter. (n.d.). Early-stage ALS hand symptoms: What to look for. ALS North Carolina Chapter. Retrieved May 18, 2025, from https://alsnc.org/early-stage-als-hand-symptoms-what-to-look-for/

14. Bediou, B., Adams, D. M., Mayer, R. E., Tipton, E., Green, C. S., & Bavelier, D. (2018). *Meta-analysis of action video game impact on perceptual, attentional, and cognitive skills.* Psychological Bulletin, 144(1), 77–110.

15. Anguera, J. A., Boccanfuso, J., Rintoul, J. L., Al-Hashimi, O., Faraji, F., Janowich, J., Kong, E., Larraburo, Y., Rolle, C., Johnston, E., & Gazzaley, A. (2013). *Video game training enhances cognitive control in older adults*. Nature, 501(7465), 97–101.

16. Ryan, R. M., Rigby, C. S., & Przybylski, A. (2006). *The motivational pull of video games: A self-determination theory approach*. Motivation and Emotion, 30(4), 344–360.

17. Russoniello, C. V., O'Brien, K., & Parks, J. M. (2009). *The effectiveness of casual video games in improving mood and decreasing stress.* Journal of CyberTherapy & Rehabilitation, 2(1), 53–66.

18. Boocock, M. G., McNair, P. J., Larmer, P. J., Armstrong, B., & Simmonds, M. (2015). *Computer gaming can be as effective as traditional balance training in older adults.* Gait & Posture, 42(4), 448–453.

19. Miesenberger, K., Kouroupetroglou, G., & Jensen, C. (Eds.). (2018). *Assistive technology: From research to practice: AAATE 2018 proceedings*. IOS Press.

20. World Health Organization (WHO). (2022). *World report on assistive technology*. Geneva: WHO.

21. Apple. (2024). *Accessibility features in gaming: A guide to inclusive play*. Retrieved from https://www.apple.com/au/accessibility

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