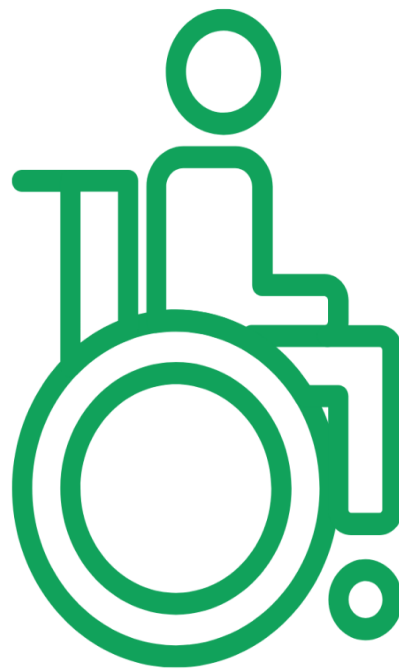# THE ULTIMATE GUIDE TO ACCESSIBILITY



## CHAPTER 3 - PHYSICAL IMPAIRMENTS

# Introduction



Many action movies tend to lionize their protagonists, in many scenes, actors recover from major accidents in a jiffy. On the contrary, in real life, even small accidents may lead to temporary or permanent injuries. Many people are born with a physical impairment, making it difficult for them to carry out daily tasks. Fortunately, some places are accessible and most of the time, a good samaritan helps them out. However, is that enough?

Every place, website, web application, mobile application, tools and technology should be made accessible so that everyone with or without disabilities can use it. In this fast-paced world, the internet is your guardian angel. Things like ordering food, booking tickets, shopping and much more are just a click away. This handbook will focus on everything related to people with physical disabilities and how to make your website accessible for them.

Did you know that there are 74.6 million people with some physical disability in the US alone?

Physical disability is a condition that limits a person's physical functioning, mobility, stamina or dexterity. For the ease of understanding, we have further divided physical disabilities into two categories

# Paralysis

Paralysis is the inability to move some or your whole body due to the loss of muscle function in the body. This happens either due to spinal cord injury (SCI) or trauma.

# Lack of motor control

Lack of motor control hinders people from maneuvering their muscles to do even simple tasks like waving their hands, having food, etc. Unlike paralysis this condition isn't just caused by SCI and trauma, some people have this condition from birth.

How do people with physical impairments navigate the web?



People with physical disabilities have very little to no control over their muscular movements. They might have tremors, lack of sensation or coordination, resulting in them not being able to use a mouse or touchscreen. A few examples of special equipment they use to assist them in using digital devices are specialist mouse, voice recognition software, and adjustable monitors to navigate the web. Unfortunately, everyone doesn't have access to equipment and rely mostly on a keyboard. So, we must ensure websites are accessible by a keyboard as a bare minimum. Let us see how you can do that in the following section.

# Easy Navigation



Before we delve deep into this topic, do a small test on your website: Go to a page on your website and navigate through it only via keyboard.

Done? If you found it difficult to navigate through your website, then it may not be as accessible as you think.

Although this test isn't a definite way to confirm your website's accessibility. It will surely make you realize the importance of making your website accessible.

Now, let's get started

- Maintain heading hierarchy as it is easy for screen readers to distinguish content
- Design your website such that the Tab key can be used to navigate forward and Shift+Tab combo to move backwards
- Design your website such that the Tab key can be used to navigate from top to bottom
- Enter/ Space is used to interact with elements such as drop-down menus, clickable links, etc.
- Avoid using too many clickable links as it spoils the user experience for people with or without disabilities.

## Focus Indicators

These are visual indicators or markers that denote or highlight elements such as links, input fields, and buttons that are on focus. Usually, they are in the form of small rectangular boxes and only one element can be in focus at a time. Fortunately, all browsers have built-in features to accommodate focus indicators.

To further enrich the user experience, you can program your CSS to make the boxes more visible or bold. Also, maintain a higher contrast ratio for a better UI.

## Accessible forms, links and media



Filling up forms, login fields, payment gateways are irksome for people with or without disabilities alike. To avoid the inconvenience, program your website to support autofill tools to fill in the information. Some websites choose to have autoplay videos on them which is a disastrous move. Autoplay videos disrupt screen readers from doing their jobs. It may create panic among users if they have multiple tabs open on their browsers, not to mention it may trigger epilepsy in some cases. Make sure that embedded media are accessible by the keyboard, and that the user always has an option to control the playback.

Lastly, avoid too many intrusive ads and popups that completely ruin the experience for all users.

In a nutshell, your website needs to have

- Clear and concise site navigation
- Clear focus indicators
- Accessible forms and links
- Full keyboard support for embedded content