

Challenges and solutions

Disability	Challenges	Solutions
Motor impairments	Users may not be able to use the mouse	Make sure all functions are available from the keyboard (try tabbing from link to link)
	Users may not be able to control the mouse or the keyboard well	Make sure your pages are error-tolerant (e.g. ask 'are you sure you want to delete this file?'). Do not create small links or moving links
	Users may be using voice-activated software	Voice-activated software can replicate mouse movement, but not as efficiently as it can replicate keyboard functionality, so make sure all functions are available from the keyboard
	Users may become fatigued when using 'puff and sip' or similar adaptive technologies	Provide a method for skipping over long lists of links or other lengthy content
Low vision	Text in graphics does not enlarge without special software, and looks pixelated when enlarged	Limit or eliminate text within graphics
	Users may set their own font and background colours	Allow users to do so by using as much real text as possible, rather than text within graphics
	Screen magnifiers reduce the usable window size	To reduce the amount of horizontal scrolling, use relative rather than absolute units (e.g. use percentages for table widths instead of pixels)

Colour blindness	Reds and greens are often indistinguishable (other colours may be indistinguishable)	This is not normally a problem except in cases where the colours convey important information. Under these circumstances, you will need to either change the graphic or provide an additional means of obtaining the same information. Usually, the most appropriate way to do this is to provide an explanation in the text itself. Shape can also be effective (e.g. octagon for stop, triangle for warning)
Blindness	Users generally do not use a mouse	Don't write scripts that require mouse usage. Supply keyboard alternatives
	Images are unusable	Provide text descriptions, in alt text and, if necessary, longer explanations (either on the same page or with a link to another page)
	Users often listen to the web pages using a screen reader	Allow for users to skip over navigational menus, long lists of items, ASCII art, and other things that might be difficult or tedious to listen to
	Users often jump from link to link using the Tab key	Make sure links make sense out of context ('click here' is problematic)
	Frames cannot be 'seen' all at once. They must be visited separately, which can lead to disorientation	Don't use frames unless you have to. If you use them, provide frame titles that communicate their purpose (e.g. 'navigational frame', 'main content')
	It may be difficult for users to tell where they are when listening to table cell contents	Provide column and row headers. Make sure tables—especially those with merged cells—make sense when read row by row from left to right
	Complex tables and graphs that are usually interpreted visually are unusable	Provide summaries and/or text descriptions

	Not all screen readers support image maps	Supply redundant text links for hot spots in image maps
	Colours are unusable	Do not rely on colour alone to convey meaning
	Users expect links to take them somewhere	Don't write scripts in links that don't have true destinations associated with them [e.g. <code>href="javascript: function(this)"</code>]
Auditory disabilities	Audio is unusable	Provide transcripts for audio clips
	Video with audio is unusable	Provide synchronous captioning and transcripts for video clips
Seizure disorders	Seizures caused by strobing, flickering, or flashing effects	Avoid any graphics, animations, movies, or other objects which have strobing, flickering, or flashing effects. Avoid graphics that may induce nausea or dizziness
Memory deficits	Users have difficulty remembering which website they are using	Clearly indicate context on every page (e.g. website logo)
	Users have difficulty completing lengthy interactive processes	Use multiple pages, number and label each step clearly and provide orientation using 'Step 1 of n'
Problem-solving deficits	Users may be unable to progress when confronted with errors	Provide clear instructions, effective error handling, clear error messages with suggestions of how to resolve
	Users are confused by unpredictable responses on website	Provide clear warnings for non-standard user interface actions (e.g. links that open documents rather than web pages)
Attention deficits	Users have difficulty focusing	Use visual cues to highlight important points or sections of the content. Remove distracting content (e.g. advertisements)

Comprehension deficits	Users have trouble reading or understanding text	Supplement text with images, illustrations and symbols. Use plain English
Maths comprehension	Users have difficulty with (or an aversion to) maths	Provide clear and simple explanations, and automatically calculate results where possible (e.g. shopping cart total cost)
Visual comprehension	Users have difficulty comprehending diagrams and illustrations	Provide text descriptions, in alt text and, if necessary, longer explanations (either on the same page or with a link to another page)

Information sourced from webaim.org.