

Cognitive Changes

The changes in thinking (known as 'cognition') in HD are characterized by a pattern of both preserved and impaired abilities. Considerable differences occur among affected individuals in terms of the presence, severity and progression of cognitive impairment. For example, some may remain relatively untouched by memory disturbance throughout the course of their illness (certainly until the later stages); whereas others may experience memory loss very early.

PRESERVED ABILITIES

It is worth emphasizing that many cognitive functions remain relatively unaffected in HD. For example, an affected person's long-term memory can remain relatively intact and they can therefore recount experiences from the past or still have a good general knowledge. Also, they are often able to remember well-learned skills and automatic actions or behaviours. Thus, if the individual has been working in a particular job for many years they will be able to continue to carry out the tasks required. However, this does become a problem if new skills are introduced and the person with HD is expected to learn new information. People with HD usually do not have trouble comprehending what you are saying to them; even until quite late in the illness, however they sometimes take a long time to respond. Their perceptual ability also remains relatively intact, for instance they are still able to recognize objects, shapes, letters, numbers, colours and persons.

COGNITIVE DECLINE IN HD

Unfortunately, HD is characterized by specific cognitive deficits. Memory appears especially affected, with problems occurring for both verbal and non-verbal memory. For example, a person with HD may have trouble remembering what you have said to them, or story lines in TV programs or

movies. Similarly, they may have extreme difficulty interpreting maps or remembering places. People with HD may have impaired ability to perceive body position in the environment (for example, difficulty with directions). Thus, they may have difficulties when transferred to a new environment, such as a nursing home and need time to adapt to their new surroundings.

Because the disease affects the frontal lobes of the brain, planning ability, judgment and decision-making are affected. As a result, people with HD often have trouble monitoring their own behaviour and do not realize that they are making errors or mistakes. Another characteristic is that people with HD have trouble motivating themselves and others often mistake this as stubbornness or laziness. Planning and problem solving become increasingly difficult and they may, for example, now have more trouble cooking a new recipe or fixing a fuse.

Affected individuals often have difficulty changing from one idea or task to another and this is why they struggle when it comes to changing routines. They also tend to lose the ability to think in abstract terms and their thinking becomes more concrete and rigid. Consequently, their conversation becomes more simplistic and they are no longer able to discuss topics or understand complicated concepts.

Verbal fluency is often impaired, so they have difficulty recalling words from memory and expressing them. Motor functions are of course also disrupted (involuntary movements), which interferes with speech and coordination.

People with HD sometimes have trouble controlling their emotions and this can lead to inappropriate behaviour, which is often

mistaken as a psychiatric disorder, particularly in the early stages when a diagnosis of HD has not been made. There are many emotional changes that occur in HD, which may be a psychological reaction to the illness or a result of physical changes in the brain, or a function of both these factors. Emotional changes include anxiety, depression, reduced motivation, apathy, irritability and rapid mood changes.

CONCLUSION

It is important to remember that in HD, cognitive ability does not correspond with the severity of the movement disorder. Also, the type of cognitive deficits does not 'run in families' so if an affected person had a parent with a severe memory disturbance and few movements, it does not necessarily follow that this pattern will be repeated. Individuals with mildly deteriorating conditions may be able to carry out their 'normal' life for many years and continue to function well within their job and with hobbies and activities.

For more information on the cognitive and psychiatric symptoms of HD, please refer to "Caregiver's Handbook for Advanced-Stage Huntington Disease" and "Physician's Guide to the Management of Huntington Disease", both found on the Huntington Society of Canada website.

Taken from the Australian Huntington Disease Association