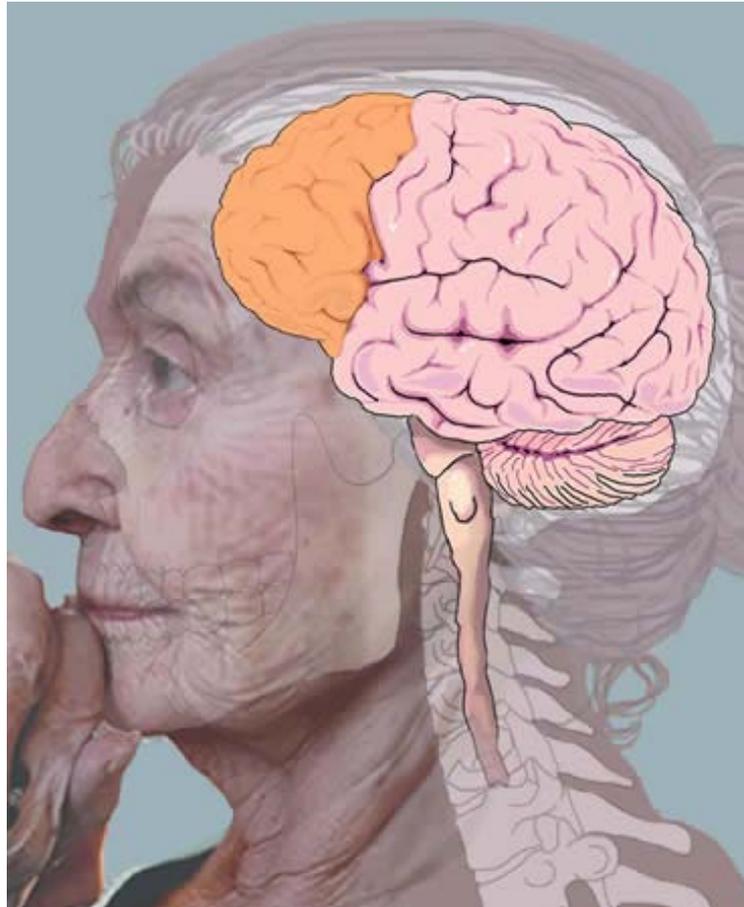


The Frontal Lobe

The **frontal lobe** controls “executive functions” like planning and organization, initiation or changing activity, and insight. It also regulates emotional responses, personality and socially appropriate behaviour, and is responsible for “expressive language”.



Frontal Lobe Dysfunction is associated with problems in:

a. Planning and organization

Associated behaviours

- Difficulties in planning and organization lead to an inability to plan and complete basic tasks such as activities of daily living, or more complex tasks, such as planning a holiday or a dinner party.
- Way-finding may be challenging for the individual, even with familiar routes.

Effective Care Strategies

- Use memory aides and instructions for common tasks such as keeping a diary or other visible written schedules for tasks such as using common equipment
- Break task into key components and provide prompts
- Create a “memory trail” to enable new learning by doing important tasks the same way, every day. Routines are important.

b. Initiation Issues

Associated Behaviours:

- The person with dementia may appear uninterested in doing anything, even previously enjoyed activities and hobbies.
- An inability to initiate may be misconstrued as laziness, uncooperativeness, or depression. Spouses or other family members may incorrectly assume that the person is unwilling to contribute to household chores.

Effective Care Strategies

- Initiate an activity (e.g. eating) by using verbal cues or hand-over-hand technique. This may be sufficient to enable the person to complete the task or activity independently.

c. Perseveration

Associated Behaviours:

- In contrast to the inability to initiate an activity, perseveration may occur, which is the inability to stop an activity (rubbing hands together or tapping a table).
- Perseveration also affects language (repeating the same story or word) and emotions (a frustrating experience early in the day can lead to frustrated mood all day).

Effective Care Strategies:

- Initiating individually meaningful activities based upon the individual's past or present interests (e.g. looking at a photo album or folding laundry).
- Triggering positive emotions at the beginning of the day that are likely to persist throughout the day. This can be accomplished by projecting a pleasant demeanour and engaging the individual in positive and meaningful conversation (reminding the person of accomplishments, funny anecdotes, and loved ones).

d. Insight

Associated Behaviours:

- Lack of insight may cause an individual to be impulsive in thought, affect, and action.
- The individual receives incorrect feedback about their performance: actions, behaviours, impact on others, insight into their abilities and needs for assistance. They may therefore refuse assistance, when in reality, assistance is required. Refusal of assistance may occur with anger directed toward the caregiver, leading to relationship strain.

Effective Care Strategies:

- Explain to family members and care givers that the behaviours that cause them concerns are not wilful or intentional.
- Avoid punitive approaches that attempt to instil remorse, or belabour how the person's behaviour makes other people feel.
- Realize that negative interactions by themselves may provoke an angry or frustrated mood in the patient that persists all day.
- Advise stress-reducing strategies such as
 - stepping back and taking a "time out" to deal with their emotions before pursuing care,
 - finding an empathetic ear to vent those feelings on a regular basis, or using humour or relaxation techniques to diffuse these emotions.

e. Regulation of emotions, personality, and socially appropriate behaviour

Associated Behaviours:

- Frontal lobe impairment can lead to socially challenging events, such as verbal outbursts or inappropriate sexual behaviours. These events occur in response to a stimulus where the individual is unable to hold back initial responses. For example, in a person with a "normal" frontal lobe, a stimulus that causes acute intense pain (e.g. stubbing one's toe) may lead to an override of the frontal lobe and cause use of uncharacteristic language or display of anger.
- In an individual with an impaired frontal lobe, a stimulus of much lower intensity such as discomfort or hunger may cause the same or more extreme behaviour. Emotional lability and mood changes with swings in emotions to quite mild stimuli are often present in frontal lobe dysfunction.

Effective Care Strategies

- Explain to family members and care givers that behaviours such as resistiveness, anger, profanity and aggression are not wilful or intentional.
- Use a non-confrontational approach to resistive or aggressive behaviours.

f. Language expression

Associated Behaviours:

- With impairment in the frontal lobes, the individual loses vocabulary and has difficulty with expressing language and articulating speech, finding the right word, and word order (*expressive aphasia*).
- There is an overall "poverty of language".
- Speech is non-fluent; phrases are short and make sense, but are produced with great effort. Short words are often omitted; e.g. "is", "and", "the".

Effective Care Strategies

- Maintain a high index of suspicion for pain, discomfort, or other symptoms that the individual may not be able to express

g. Re-emergence of primitive reflexes

Associated Behaviours:

- The startle or “Moro” reflex is an exaggerated startle response and limb hypertonia to an unexpected movement or noise. This startle reaction, or the presence of paratonia, a waxy rigidity found in dementia, can create the false impression of “resisting” care.
- The grasp reflex is an involuntary grasp reaction that occurs when the palm is touched. The return of this reflex can result in “grabbing” behaviours with the potential for being perceived as “difficult” or dangerous.

Effective Care Strategies:

- The startle reflex can be minimized by approaching the individual from within their visual fields (from the front), and by moving and speaking at a calm and relaxed pace. To minimize paratonia, limb movements must be done slowly and gently.
- The grasp reflex can often be reversed by stroking the back or side of the hand