

Subarachnoid Haemorrhage and the Brain: Cognition and Emotional Impact



Dr. Carleen Scott

Chartered Clinical Psychologist
specialising in Stroke and
Neuropsychology

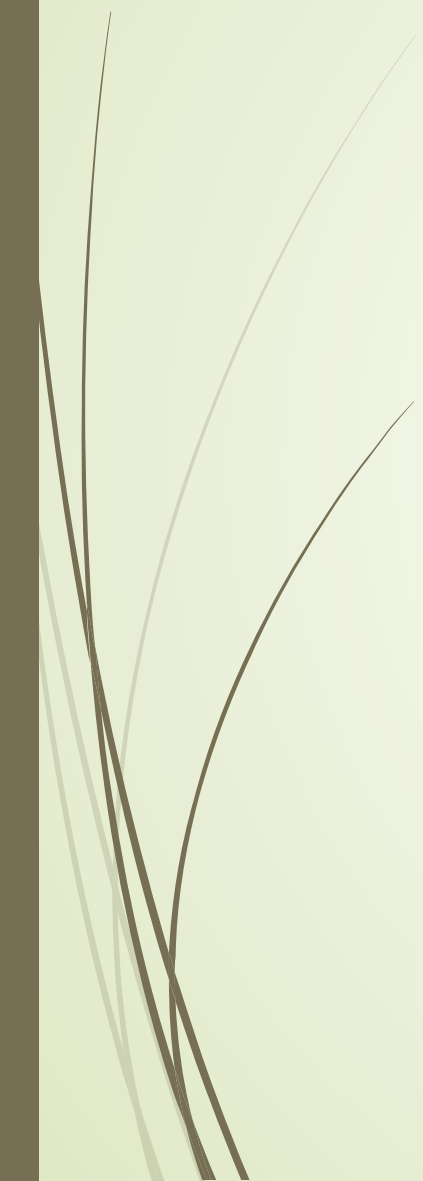


Aims

- To think about the brain - what parts of the brain are affected
- To explore how thinking and memory work
- To explore the emotional impact of thinking and memory problems
- To think about and share strategies that can help with managing thinking and memory problems and emotional difficulties



The Lived Experience...

- What thinking and memory problems are experienced?
 - How do these problems impact on us?
 - How do they impact on the people around us?
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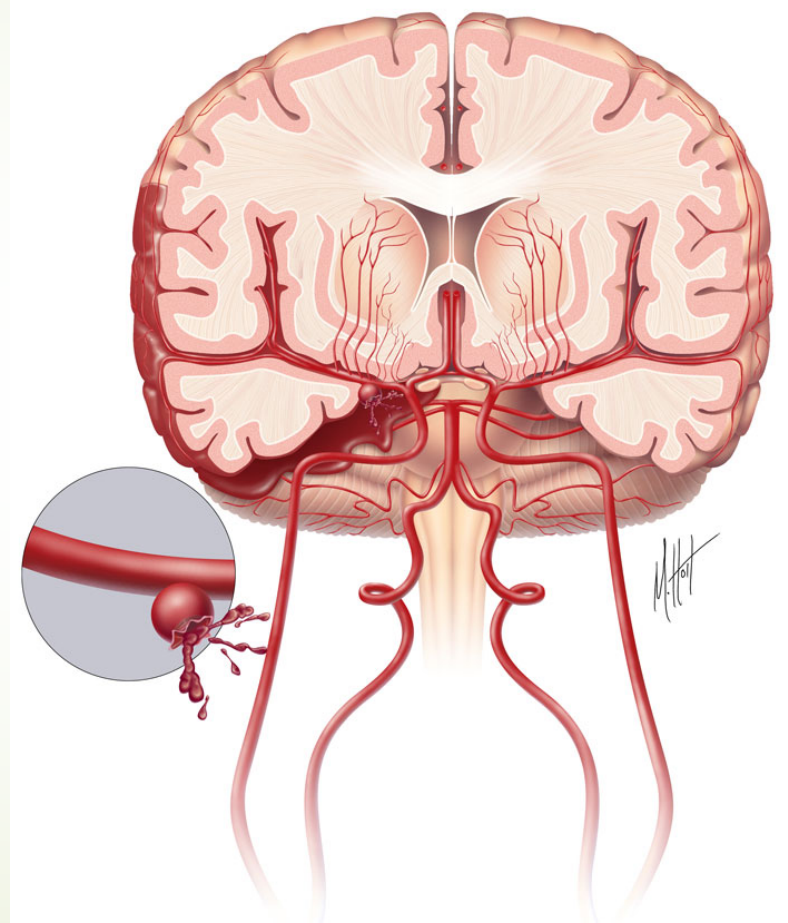
What is an SAH?


An SAH is mainly described as a ruptured brain aneurysm which occurs in the subarachnoid layer of the brain which contains cerebrospinal fluid.

It can sometimes be related to head injury

Symptoms can include:

- confusion
- lethargy
- loss of consciousness
- severe headache
- vomiting
- slurred speech





What are the difficulties are experienced?

- Can include:
 - Fatigue
 - Mood and anxiety difficulties
 - PTSD
 - Eyesight - Sore eyes, permanent double vision
 - Epilepsy
 - Cognitive difficulties
 - Mobility
 - Sleep disturbance
 - Headache and pain



Common Thinking and Memory Problems

Memory (remembering what we see and/or hear):

- ▶ Verbal memory
- ▶ Visual memory
- ▶ Executive Functioning (includes our ability to hold in mind several rules or tasks at once and act on them e.g. multi-tasking, inhibition, insight)
- ▶ Language Impairment

Memory and the Brain

The cerebral cortex

Perception, spatial awareness, manipulating objects, spelling

Parietal lobe

Wernicke's area

Understanding language

Broca's area

Expressing language

Frontal lobe

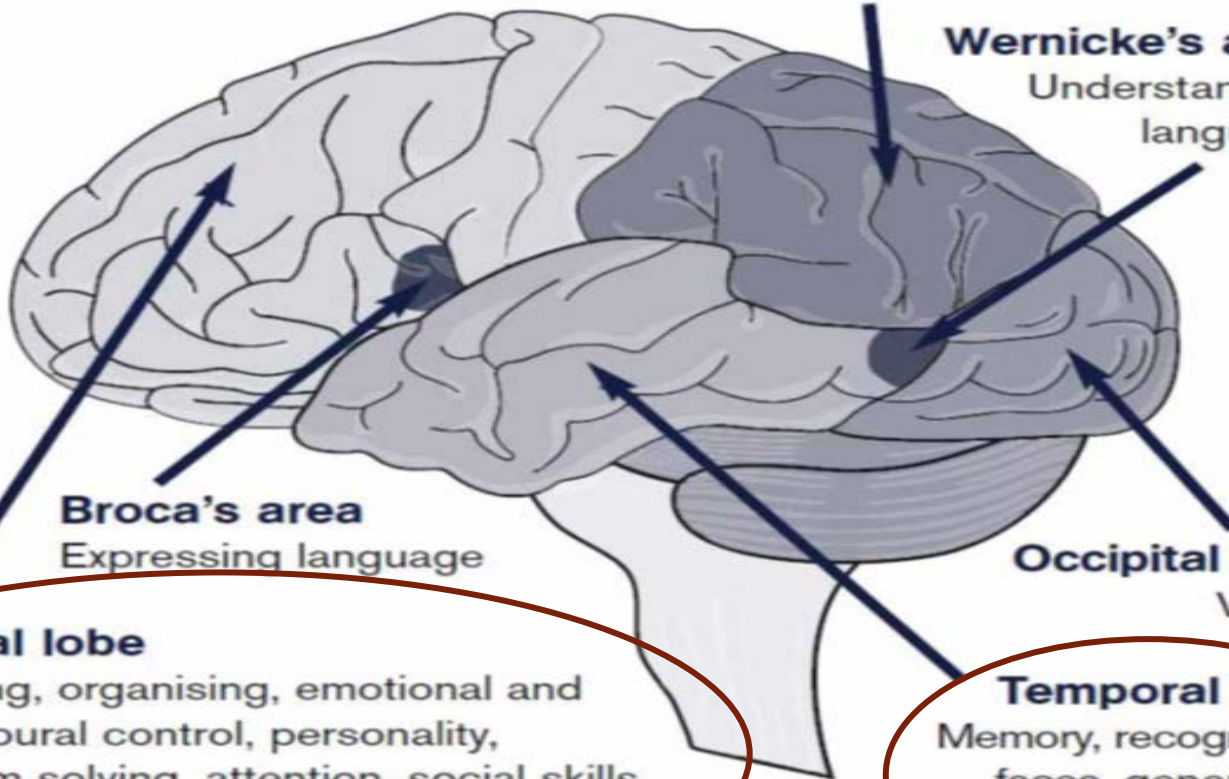
Planning, organising, emotional and behavioural control, personality, problem solving, attention, social skills, flexible thinking and conscious movement

Occipital lobe

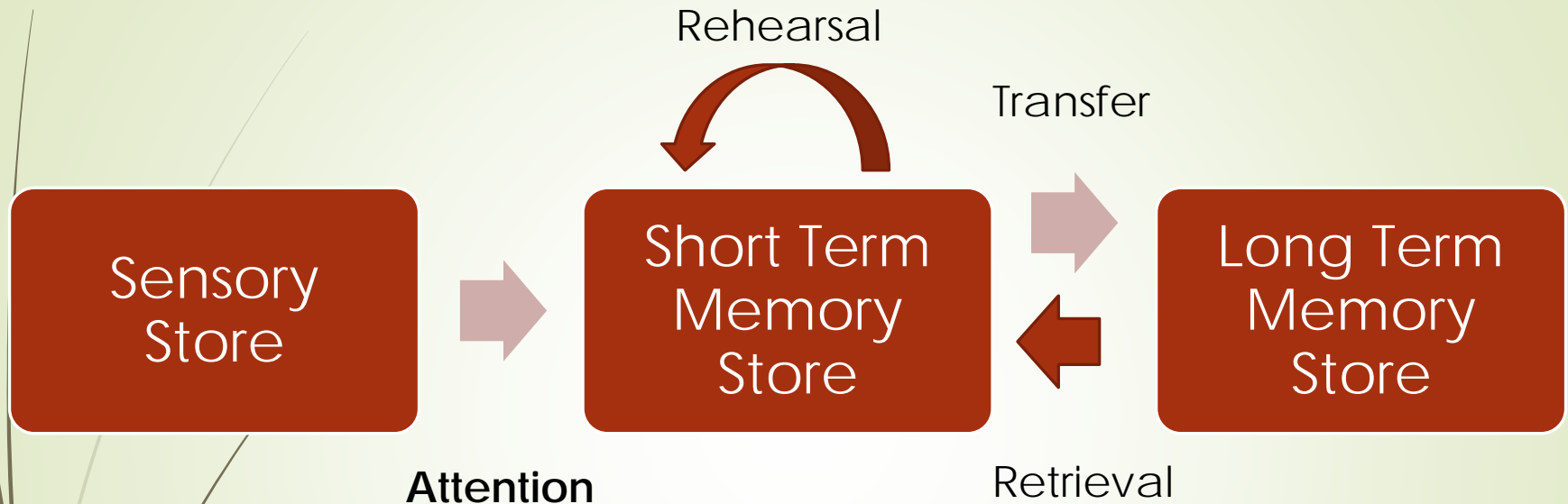
Vision

Temporal lobe

Memory, recognising faces, generating emotions, language



How does Memory Work?

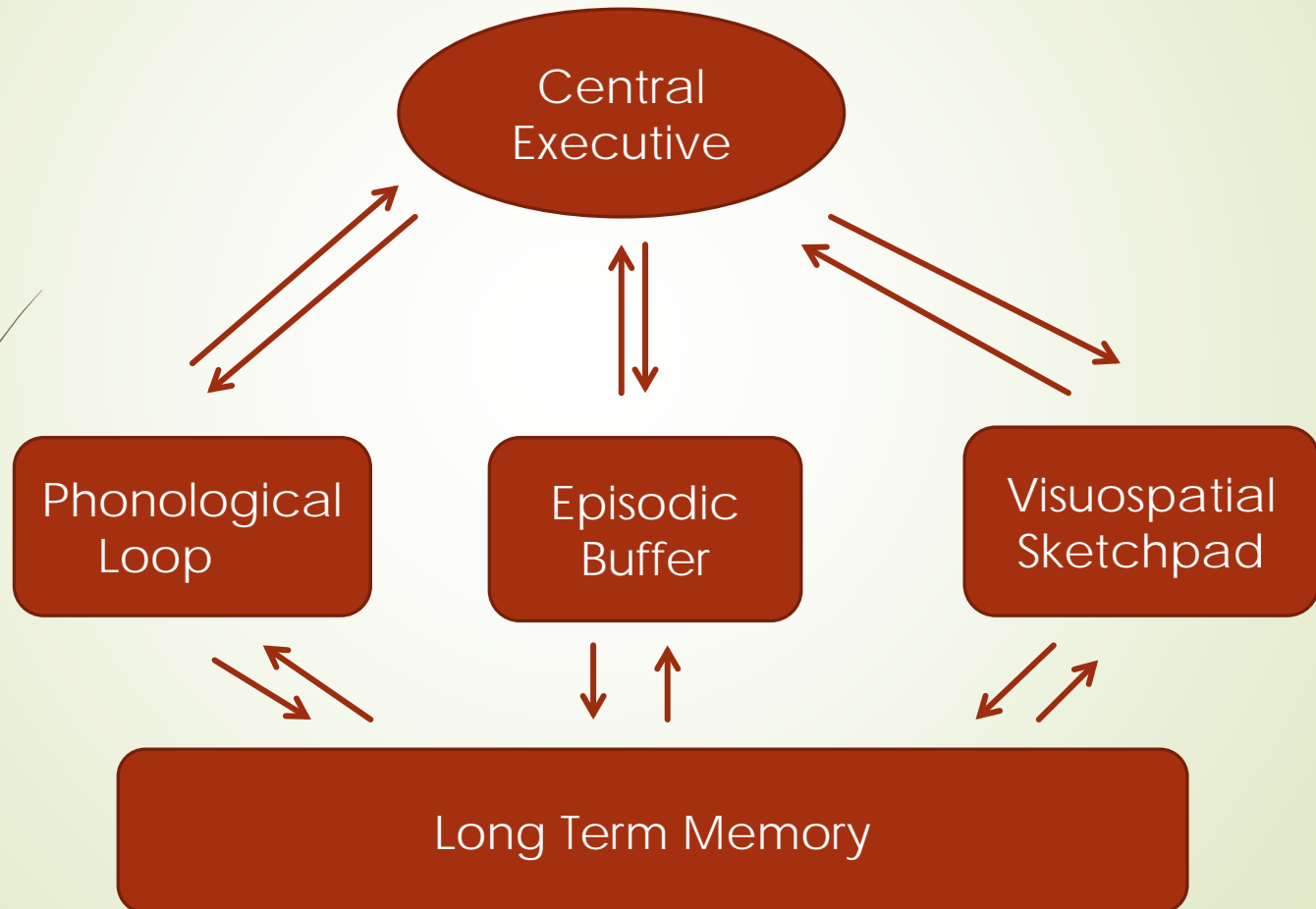


Information Lost:

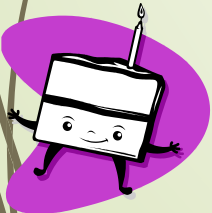
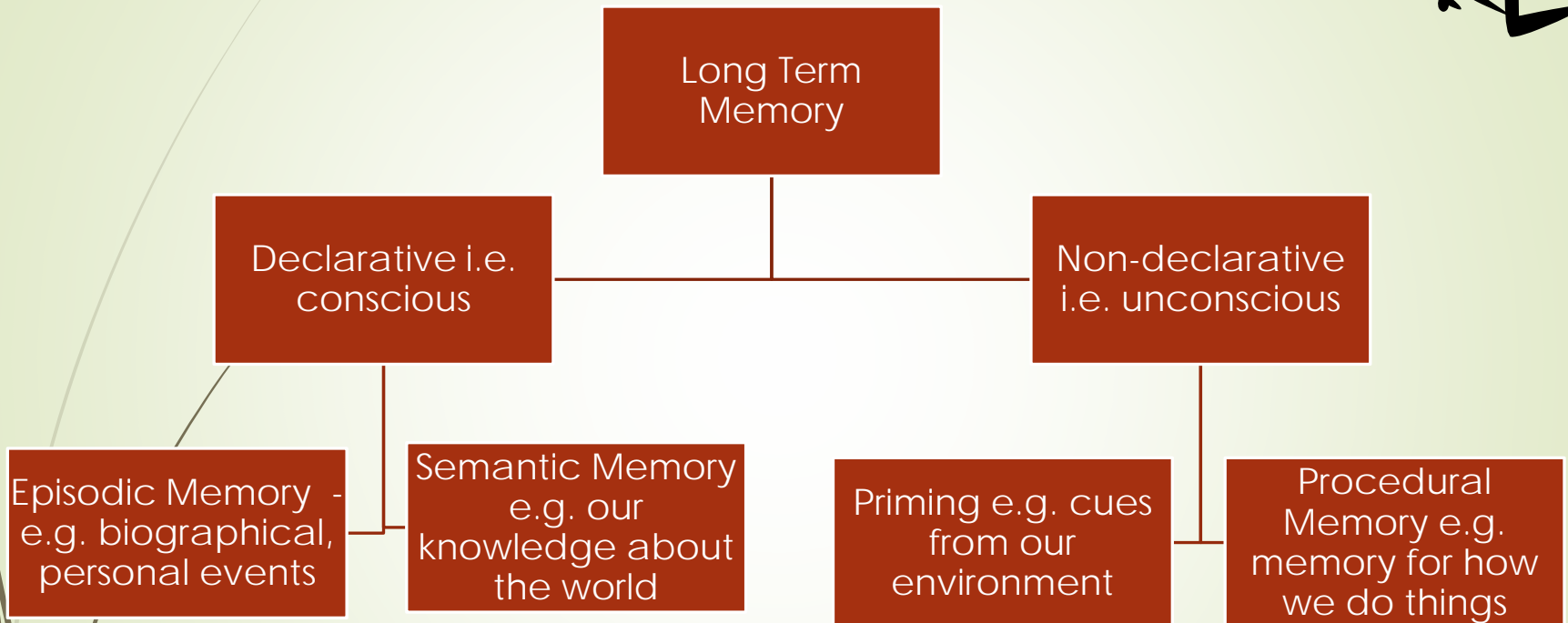
Conscious or unconscious forgetting
Interference
Decay
Distractions

Working Memory

Baddeley and Hitch (1974)



Long Term Memory



What are the Neuropsychological Effects of SAH?

- ▶ 'I...feel as though I've turned into a bit of a man because I can't multitask quite so easily as I used to'
- ▶ '...just feeling as though I was kind of dulled down a bit in my reactions to things and needed a bit more time to read things or react'
- ▶ 'I'd have a cup of tea and I'd say to my wife 'Have I had that cup of tea?' within seconds of having it'

Quotes from: Wertheimer, A., (2008). A Dented Image: Journeys of Recovery from Subarachnoid Haemorrhage. Hove: Routledge

Memory after SAH

- Reduction in capacity of in Working Memory/Short Term Memory.
- Difficulty holding information in Working Memory/Short Term Memory (linked with attention difficulties)
- Disruption in moving information from Working Memory to Long Term Memory

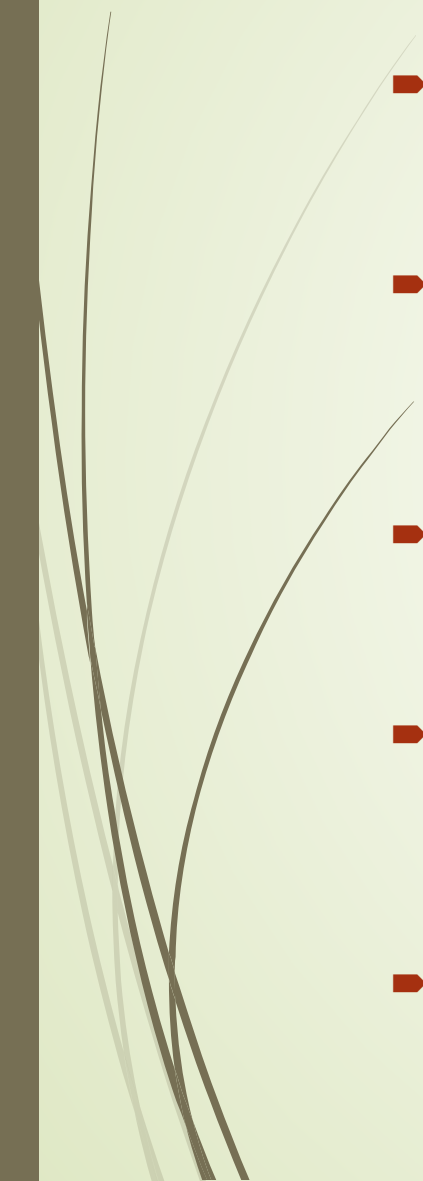


Memory after SAH

- Impaired long term memory i.e. difficulty making new memories or retrieving memories:
 - **Retrograde Amnesia:** Difficulty remembering before the injury or illness. Difficulty retrieving and recalling events before the brain injury
 - **Anterograde amnesia:** Difficulty encoding new information. Therefore difficulty making new memories since the time of the injury and the current time. Difficulty recalling daily life events.
 - **Post-traumatic amnesia:** Difficulty remembering the traumatic event, learning and recalling new information after the injury until able to be continuously orientated to date and time e.g. able to remember the day of the week. Confusion and disorientation.
 - **Prospective memory difficulties:** difficulty remembering things to do in future



Wellbeing, Thinking and Memory

- **Anxiety** – slower, scrambled or blocked thoughts/words, memory problems, easily distracted
 - **Tiredness** – can impact on maintaining attention, reaction times and thinking speed, accuracy and recall of information
 - **Pain** – can impact on attention, thinking speed, problems with learning and problems solving
 - **Depression or Low Mood** – less motivation, less effort to recall information (especially prospective memory), linked with fatigue, difficulty learning
 - **Stress & Frustration** – vicious cycle which increases tiredness, linked with depression
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Anxiety

Psychological

- restlessness
- a sense of dread
- feeling constantly "on edge"
- difficulty concentrating
- irritability

Physical

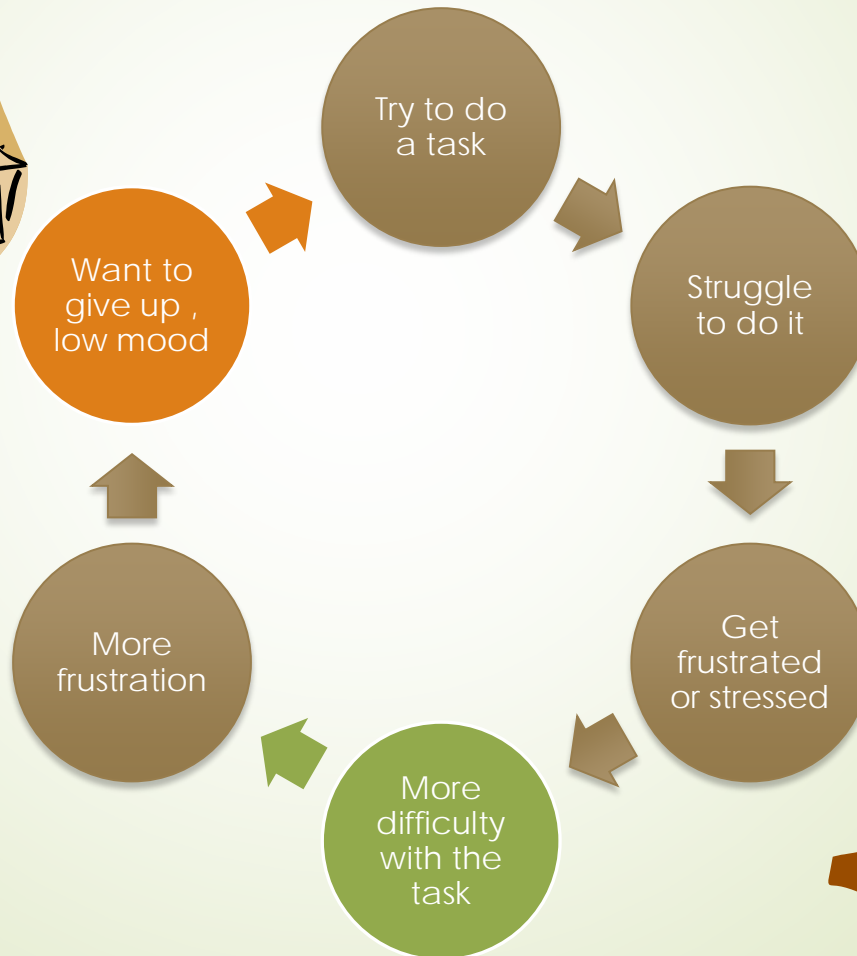
- tiredness
- Strong or fast heartbeat
- muscle aches & tension
- trembling
- sweating
- shortness of breath
- feeling sick
- headache
- pins and needles
- Sleep difficulties



Low Mood

- ▶ continuous low mood or sadness
- ▶ feeling hopeless and/or helpless
- ▶ having low self-esteem
- ▶ feeling tearful
- ▶ feeling guilt-ridden
- ▶ feeling irritable and intolerant of others
- ▶ having no motivation or interest in things
- ▶ finding it difficult to make decisions
- ▶ not getting any enjoyment out of life

Low Mood and Frustration





What Can Help?

- **Attention:** Doing the most **complicated** task **first** or when most alert. Reducing distractions.
- **Reducing** the **amount** of **information** given. Keep it simple.
- **Thinking Speed: Slowing** things **down**
- **Active Processing** to help learning and encoding information into long term memory:
 - Make it **novel** and **interesting!**
 - **Repetition**
 - **Writing** things **down** - e.g. calendar, notebook, whiteboard, journals
 - Mnemonics (making **connections** and **meaning**),
 - Chunking (**categorising** information),
 - Auditory vs. visual information (e.g. **pictures, mental images, alarms**),
 - Organising **information** so it is **clear**
- **Retrieval:** Use of cues – **colour, diagrams, key words**

Anything Else?



- **Mindfulness** - paying attention (on purpose) to the present moment in a non-judgemental way. Helps increase attention and concentration
- **Relaxation** - deep breathing exercises, activities you enjoy and promote relaxation or de-stress
- **Managing low mood and anxiety** – regular and meaningful activity, physical exercise, talking therapy, medication
- **Manage fatigue & pain**– better quality sleep, pacing activities, medication (for pain)





Mindfulness Exercise...





Questions???





Contact Details

NHS Contact Details:

Stroke and Neuropsychology

St Peter's Hospital, Spital Road, Maldon, Essex,
CM9 6EG

Tel: 01621 866 900

carleenscott@nhs.net