

POST COVID SYNDROME AND BRAIN FOG

What is Post-Covid Syndrome or 'Long Covid'?

Post-COVID syndrome or Long Covid is defined by the National Institute for Health and Care Excellence (NICE) as signs and symptoms following an initial infection consistent with COVID-19 which continues for more than 12 weeks and is not explained by an alternative diagnosis.

85% of patients experiencing Long Covid typically report 4 or more neurological complaints including brain fog, headache, numbness, tingling, dizziness, insomnia, loss of taste and smell and tinnitus (Koralnik, 2021). 'Brain Fog' is the most common (81%) (Graham et al, 2021).

What is Brain Fog?

The term '*brain fog*' is generally used by patients to describe the feeling of being mentally slow, fuzzy, or spaced out.

Brain fog is a type of cognitive dysfunction and/or mental fatigue which can cause a profound and frightening disruption to a person's daily life and function. It is not a diagnosis or a medical term; more of a general umbrella term used to describe a series of symptoms.

Some researchers and clinicians use the term "neuro-Covid" to describe the acute manifestations of COVID-19 within the brain.

Typical Symptoms/Presentation:

- A lack of mental clarity, or a lingering mental fog;
- Feeling fuzzy, sluggish and '*out of it*';
- Poor short term memory;
- Feeling distracted with reduced attention, concentration and focus;
- Slow processing of information (written and verbal);
- Difficulty reading, writing and understanding information;
- Difficulty making decisions;
- Difficulty problem solving or multi-tasking;
- Difficulty making plans;
- Difficulties with word-finding or finding the correct word to use;
- Difficulty selecting the right topic and not making sense during conversations; and
- Feeling overwhelmed by simple tasks and having difficulty with routine situations.

How long will it last?

27%, or around one third, of those reporting Post-Covid 'Brain Fog' will experience a period of prolonged cognitive difficulty (Windsor, 2021), however, at present, there is no evidence to suggest that it is permanent.

Brain fog symptoms usually improve with time; particularly following lifestyle management advice; adopting healthy habits for recovery; and returning to a more normal lifestyle.

In a study of patients in Germany there was no evidence to indicate direct brain damage, or permanence, following infection with Covid-19 (*Matschke et al, 2021*). Any permanent long term effects usually stem from more critical illness – prolonged hospitalisation, multiple organ damage or intubation (*1/3 of these patients recover fully*) (Jaywant et al, 2021)

The brain can, however, take a long time to heal and the sooner management and rehabilitation begin, the better the outcome is likely to be.

Post-Covid related 'Brain Fog' symptoms should improve with:

- Time
- Rehabilitation
- Management advice and strategies
- Adoption of healthy lifestyle habits
- Return to normal lifestyle and routine

Which cognitive processes can be affected by Brain Fog?

- *Attention* – selective concentration;
- *Memory* - recall of facts, procedures, and past & future events;
- *Perception* - interpretation of sensory information;
- *Insight & judgment* - understanding one's own limitations & what they mean;
- *Organisation* - arranging ideas in a useful order;
- *Orientation* - knowing where, when, & who you are, as well as why you're there;
- *Language* - words for communication;
- *Processing speed* - quick thinking & understanding;
- *Problem-solving* - finding solutions to obstacles;
- *Reasoning* - logically thinking through situations;
- *Executive functioning* - making a plan, acting it out, evaluating success, & adjusting;
and
- *Metacognition* - thinking about how you think.

A problem with one or more cognitive functions can cause difficulty performing activities of daily living safely and efficiently, as well as being able to communicate effectively.

What causes Brain Fog?

The cause of brain fog is a mystery because the symptoms are so varied.

There may be one or several contributors to 'Brain Fog', *however the exact underlying cause in relation to Covid-19 is the subject of ongoing research.*

Some **potential** post Covid-19 causes and contributors can include:

Primary or Organic Contributors

- **Post-Viral Fatigue:**
Fatigue, or excessive tiredness, is common after viral infections and can affect your ability to concentrate. You may feel that you don't have the mental energy needed to pay attention to things, even when you think something is important. If you can't concentrate on something, it is harder to remember it. It may be difficult to concentrate on work tasks, especially the less interesting tasks, as trying to concentrate can feel exhausting.
- **Lingering Covid-19 virus/viral debris**
The Covid-19 virus has been shown to cause direct infection of proteins found in the brain stem, cerebellum and cranial nerves (known as Neurotropism). This is similar to the pathological process which occurs in Alzheimer's Disease.
- **Inflammation of the Brain (Encephalitis)**
In a small number of people, Covid-19 can cause inflammation in the brain. Research, so far, indicates that, when a person is infected with Covid-19, the body's immune system can over-react causing a hyper-inflammatory response which results in it attacking normal, healthy cells, including those in the brain. A storm of excess cytokines (molecules released by the body's immune system to fight off infection) can seep into the area around the brain because the protein in the brain is similar to the viral proteins that the immune system would usually attack. This can cause brain inflammation inducing the death of the brain cells required for effective cognitive function. The specific effects depend on which part(s) of the brain have been affected.
- **Insufficient Oxygen Supply to the Brain (Hypoxia):**
Some people with COVID-19 experience breathing problems caused by severe inflammation of the lungs called Acute Respiratory Distress Syndrome (or ARDS). Patients who develop ARDS are usually admitted to intensive care and often their breathing is supported by a mechanical ventilator. The brain is highly dependent on oxygen and if oxygen levels remain low for a period of time it can result in damage to the brain. The effects on memory and thinking will depend on which parts of the brain are involved.
- **Insufficient Blood Supply to the Brain (Ischaemia):**
A small proportion of people suffer a stroke a result of having Covid-19, caused by insufficient supply of blood to the brain. If you were one of these your healthcare team will have informed you. Although it is rare, Covid can affect blood vessels, causing blood

clots to form which travel to the brain and interrupt blood flow to a specific part(s) of the brain. The consequences of this depend on which part of the brain is affected, but could include physical, cognitive or emotional problems.

- *Microvascular Damage:*

Covid-19 has been shown to affect microcirculation (microcirculation is the network of arteries, arterioles, capillaries and venules that supply and drain blood from every tissue and organ in the body). This can cause endothelial cell swelling and damage (endotheliitis), microscopic blood clots (microthrombosis), capillary congestion, and damage to pericytes (important for blood vessel formation, maintenance of the blood-brain barrier, regulation of immune cell entry to the central nervous system and control of brain blood flow) - (Ostergaad, 2021).

Covid-19 related microvascular damage and inflammation may cause tissue hypoxia as well as disturbing neurotransmitter synthesis within the brain. This can impact on the appropriate distribution of oxygen, glucose and other nutrients by the cerebral vasculature which is critical for proper cognitive performance.

Dysfunction of the endothelial cells (cells in blood vessel/tissue lining responsible for vascular relaxation and contraction, blood clotting, immune function and platelet adhesion), has also been associated with cerebrovascular damage and cognitive decline.

- *Heart Inflammation/Damage:*

There are three main types of heart inflammation: endocarditis, myocarditis, and pericarditis. Endocarditis is inflammation of the inner lining of the heart's chambers and valves. Myocarditis is inflammation of the heart muscle. Pericarditis is inflammation of the tissue that forms a sac around the heart. Many things cause heart inflammation. Common causes include viral or bacterial infections and medical conditions that damage the heart and cause inflammation. Heart failure (HF) following heart damage leads to a decreased blood flow due to a reduced pump efficiency of the heart muscle. A consequence can be insufficient oxygen supply to the brain.

- *Mast Cell Activation Syndrome (MCAS):*

MCAS is a condition in which a person experiences repeated episodes of the symptoms of anaphylaxis – allergic symptoms such as hives, swelling, low blood pressure, difficulty breathing and severe diarrhoea. MCAS is caused by the mast cells in the body releasing substances called mediators to fight off infection. The mediators cause symptoms of allergic reaction (itching, mucus and inflammation). MCAS can cause neurological symptoms including headache, confusion and fatigue.

- *Breathing Pattern Disorder or Dysfunctional Breathing:*

Dysfunctional breathing is a term that relates to a change in breathing pattern from an efficient to less efficient pattern. Triggers can include acute illness or infection and it is a common occurrence following Covid-19.

Efficient breathing tends to involve nasal inhalation which is automatic, effortless, relaxed, quiet and steady. This type of breathing will usually reach your diaphragm and you will see tummy movements. Inefficient breathing tends to involve mouth inhalation with short, shallow, quick and erratic breaths. It also tends to be noisy and can cause tension in the shoulders. This type of breathing tends to involve movement at the top of the chest only and may feel like panting or hyperventilation.

In a study by Zelano et al in 2016, the way we breathe has been shown to have an impact on certain areas of brain activity. During inhalation, neurons in the olfactory cortex, amygdala and hippocampus (the areas responsible for emotions, memory and smell) are stimulated.

- *Persistent Loss of Smell:*

Loss of smell has been linked to ongoing dementia-like symptoms in those who had a positive test for Covid-19 and persistent loss of sense of smell can be a predictor of cognitive impairment. In a study by Professor de Erausquin, around 34.4% had signs of multi-domain cognitive impairment including severe short term memory, semantic memory (ability to recall a word, concept, number), executive function failure and reduced attention. The severity of this cognitive impairment correlated with a persistent loss of sense of smell, rather than the severity of the acute infection. Covid-19 has also been found to be present inside the cells of the olfactory epithelium up to 6 months after initial infection. Proteins found along the olfactory tract and bulb within the brain suggest this could be a possible route for the virus to infect the brain.

- *Diabetes:*

Cases of new Type 2 diabetes diagnoses have been reported in some people who have had Covid-19. Diabetes is a chronic disease which happens when your blood glucose, also called blood sugar, is too high. This could be related to the direct effects of coronavirus on the body, or the effects of lifestyle changes due to the pandemic.

Glucose is the main form of energy for the brain. In diabetes, there is a problem with both glucose and insulin that leads to a host of problems. Glucose needs insulin to enter the cells, but in diabetes either the body can't make insulin, doesn't make enough, or can't use its insulin correctly. As a result, glucose remains in the bloodstream and accumulates. High blood sugar (hyperglycaemia) does extensive, system-wide damage. Low blood sugar (hypoglycaemia), a result of diet and/or medication, also causes damage. These blood sugar problems impair functioning in the brain and can cause brain fog and memory loss.

Blood sugar fluctuations affect neurotransmitter levels. High blood sugar increases serotonin and GABA, causing fatigue. Low blood sugar causes the brain to release more Cortisol, Glucagon, and Adrenaline in an attempt to counteract hypoglycaemia. Stress increases, and concentrating and focusing become more difficult.

Blood sugar highs and lows also create problems with blood circulation. Restricted circulation to the brain starves it of nutrients and oxygen. The brain can't function at its peak when it lacks nourishment; therefore, symptoms of brain fog begin.

Hyperglycaemia damages vessel walls over time, reducing their flexibility and responsiveness to the blood flow within them. In the brain, blood vessels need to flex to accommodate changing circulation. The brain adjusts the amount of blood it uses to support the functioning of various areas and structures. When blood vessels are rigid, they don't move fluidly to supply nutrients and oxygen where they're most needed.

Other Medical Contributors:

- Chronic Infection (viral, fungal or bacterial)
- Dysautonomia
- Anaemia
- Hormonal Imbalances
- Menopause/Peri-Menopause
- Thyroid Issues – Hypo/Hyperthyroidism
- Migraines
- Sleep Apnoea
- *Other Medical Conditions* such as Sjogren Syndrome, Alzheimer's Disease, Lupus, Multiple Sclerosis, Arthritis and Dehydration.

Medical investigations via GP should be completed to rule out any potential medical causes/diagnoses contributing to symptoms of 'Brain Fog'

Secondary Contributors to 'Brain Fog'

- **Mental Fatigue (associated with Post-Viral Fatigue / or Post-Covid Fatigue):**
When experiencing post-viral fatigue, it is difficult to think, concentrate or take in new information. Basic word finding and thinking can be difficult. Energy is required for mental and cognitive activity, similar to running out of energy when doing a physical task people cannot cope with longer periods of mental/cognitive activity and start to lose concentration and ability to process and retrieve information.

A useful analogy to explain fatigue as the cause of brain fog is that of the filing clerk/filing cabinet. It can be helpful to think of your brain as a filing cabinet and your mental processes as the filing clerk. With fatigue, the filing cabinet (the brain) is not necessarily damaged; it's just that the filing clerk has been slowed down (meaning your brain structure is fine, however your mental processes are not working as effectively because they are tired).

- **Pain:**
Scientific evidence supports the notion that pain negatively affects cognitive ability. While temporary pain doesn't impact cognition much, persistent pain can cause changes in the brain systems that control cognitive function. Studies have shown that pain can disrupt several cognitive processes, leading to problems in attention, spatial memory, recognition memory and decision making. Pain can be consuming and distracting and can make it more difficult for people to perform cognitive and memory tasks. Pain can also increase levels of stress hormones like cortisol, which has been shown to affect brain cell structure.
- **Side Effects of Medications:**
Some medications can cause tiredness and cognitive difficulties. Typical culprits include opioids, antihistamines, tricyclics, benzodiazepines, Z drugs, sedative anti-depressants and anti-psychotics.
 - *Benzodiazepines* (prescribed for anxiety) act directly on the parts of the brain that convert short term memories into long term memories.
 - *Statin drugs* lower cholesterol everywhere in the body, including in the brain, where cholesterol is needed for connections between nerve cells.
 - *Narcotics* - Narcotic painkillers change chemical signals associated with cognition.
 - *Beta Blockers* to treat hypertension also block chemical messages in the brain, such as neurotransmitters.
 - *Non-Benzodiazepine Sedative-Hypnotics* prescribed for sleep can act on many of the same brain pathways and chemical messengers as benzodiazepines. Sleep aids can also cause amnesia and sometimes trigger strange behaviours, such as cooking a meal or driving a car with no recollection of doing so.

A medication review and detailed drug history by GP is advised.

- **Poor Sleep or Sleep Deprivation:**
Impaired sleep is common in those who have been medically unwell or those who have been through stressful circumstances. Poor sleep, leading to tiredness and fatigue, can adversely affect thinking ability. Poor sleep habits and sleep deprivation can contribute in several ways to brain fog and cognitive dysfunction. The process of sleeping is required to clear toxins from the brain; to build new neural connections; and to process and consolidate new learning and memories. Sleep deprivation has been shown to cause significant drops in memory and reduced hippocampus volume (the area of the brain responsible for consolidation of short-term memories and formation of long term memories). Managing your sleep is important in maintaining optimal cognitive function.
- **Dietary Issues or Nutritional Deficits:**
Brain fog can occur as a result of nutritional deficiencies and a lack of the vitamins required for healthy brain function. Eating patterns that involve skipping meals may contribute to mood swings by causing fluctuations in blood sugar levels and low glucose in the brain can also lead to brain fog. Food restriction can lead to binge eating, bigger emotional responses, poor concentration, increased stress, and an overall lower sense of well-being. Inflammatory foods can also increase the pro-inflammatory cytokines in the blood and brain leaving you with low-grade inflammation that can manifest as a foggy brain. Being overweight can also contribute to inflammation. Inflammation stresses your body and rapidly uses up nutrients, specifically the B vitamins, magnesium, and vitamins C and E.
- **Stress and Anxiety:**
Anxiety and stress can have a considerable impact on cognitive functioning, memory and concentration. Atrophy of brain regions, resulting from repeated exposure to stressful conditions, has a cognitive cost. Working memory, attention, response inhibition and cognitive flexibility have all been found to be impaired by stress.
- **Low Mood:**
Depression can have an impact on cognitive functioning and can affect a person's capacity to concentrate and focus, as well as remember key information. Studies have shown that many patients with depression report significant cognitive deficits, including deficits in executive function (problem solving, decision making, and judgment), memory, and attention to daily activities.
- **Social Isolation:**
People who feel lonely or disconnected from others have been shown to have faster rates of cognitive decline than people who don't feel lonely. The mechanisms that link social isolation with poor cognition may include the detrimental effect of a lack of social stimulation on the brain (reduced verbal fluency, memory and recall) which may result in lower cognitive reserve, poorer resilience of the brain, and cognitive decline.

- **Alcohol, Nicotine or Illicit Substance Use:**
Excessive alcohol use (binge drinking and/ or consuming more than 14 units a week) and use of illicit substances can contribute to cognitive difficulties. Stimulant drugs, like nicotine and amphetamine, improve cognitive function at lower doses but impair memory performance at higher doses. Depressant drugs, like alcohol, can cause long-term effects on prefrontal cortex function, disrupting cognitive abilities.
- **Mental Over-Exertion:**
Mental over-exertion leading to mental fatigue has been shown to increase feelings of tiredness, lack of energy, decreased motivation, and alertness which can negatively influence performance and cognitive functioning. These can include problems with memory, attention, processing speed, language comprehension and word-finding abilities, among others.
- **Physical Inactivity or Under-Exertion:**
One of the cognitive benefits of exercise is that it enables you to cope with life's challenges. Exercise can help boost thinking and memory indirectly by improving one's mood and reducing stress, depression, and anxiety. Aerobic exercise has been shown to decrease feelings of depression, anxiety, and stress. Exercise also oxygenates and clears toxins within the body.

Assessment of Brain Fog

Health Professionals can complete the following initial assessments in order to identify any specific cognitive deficits or areas of concern which may require further medical investigation:

- **GP assessment**
Discussion re symptoms, medications, blood tests, investigations/imaging etc.
- **Holistic assessment**
A detailed comprehensive assessment completed by a range of professions looking at your symptoms alongside your medical history, medications, lifestyle, habits and routines.
- **Self-Monitoring and Reporting**
Your own perspective of how your cognition has changed from what it was pre-Covid; along with the perspective of family and friends.
- **Outcome Measures/Screening Tools**
Questionnaires completed by a range of disciplines, which look at Fatigue, Mental Fatigue, Breathing Pattern, Sleep, Diet, Mental Health
- **Formal Cognitive Assessment**
A formal pen and paper assessment completed by GP, Occupational Therapist or Mental Health Practitioner, assessing different areas of cognition.
- **Functional Assessment**
A practical assessment completed by an Occupational Therapist where you are assessed completing activities of daily living such as making a cup of tea; getting washed and dressed or shopping. A functional assessment is used to observe the effect that your cognitive deficits have on your day to day functioning.
- **Specialist Assessments/Investigations**
Assessments and investigations completed by specialist services – see next section.

Treatment/Management of 'Brain Fog'

Initially, you should speak to your GP regarding any health worries and/or potential side effects of medications which could be contributing to feelings of brain fog or cognitive dysfunction to rule out any medical causes. Blood tests, hormone levels and/or other investigations may be necessary to rule out any other underlying medical causes.

You can also discuss medications with your GP to weigh up the risks and benefits and to discuss non-prescription alternatives.

If your assessments show any significant cognitive deficits, you may be referred to one of the following services for further assessments and/or medical investigations:

- General Practitioner;
- Rehabilitation Services;
- Memory Assessment Services;
- Psychological Therapies
- Neurology/ Neuro-psychology/ Neuro-Rehabilitation Services.

If your assessments do not show any significant cognitive deficits and your brain fog is felt to be related to non-medical reasons, current NICE Guidelines (NG188 – Managing the Long Term Effects of Covid-19) recommend education on managing Brain Fog for those experiencing the long-term side effects of Covid-19.

Post-Covid Brain Fog is thought, by researchers, to resemble Post-Concussive Syndrome (also inflammation) and treatment recommendations are similar (Weintraub, 2021).

As of now, the best treatment for brain fog caused by COVID-19 is fatigue management; cognitive rehabilitation and/or remediation; use of compensatory aids and strategies; and adopting healthy lifestyle habits of both body and mind.

Managing 'Brain Fog'

The following tips may help boost your mental (and physical) function if you are dealing with ongoing brain fog:

Managing Energy/Fatigue:

- Seek help with Fatigue Management (Occupational Therapy/Physiotherapy)
- Pace yourself – ensure a good balance of activity and rest.
- Alternate between cognitive and physical tasks during the day.
- Don't rush! Take your time and complete activities at a slow pace.
- Do not over-exert yourself mentally or physically – stay within your limits.
- Work for shorter periods and take regular rest breaks.
- Pick a time of day when you are less tired to complete more complex thinking activities.
- Set small targets and goals for yourself.

Relaxing the Mind:

Ensure plenty of rest and regular breaks, including mental, sensory, social, emotional, spiritual, creative, sensory and environmental rest, as well as physical.

Type of Rest	When	Why	Examples
Mental	After mental exertion	To calm the mind	Deep Breathing, Sitting in Nature, Meditation, Calming Music, Light Exercise, Yoga, Tai Chi
Sensory	After sensory exertion (loud noises, bright lights)	To reduce sensory input	Sitting in a Quiet, Dark Room, Closing your Eyes
Emotional	After emotional exertion or stress	To offload and rest your emotions	Journalling, Support Groups, Talking to a Friend, Counselling
Social	After being around others	To re-set	Spending time alone, limiting interactions, saying no and turning down plans
Spiritual	Everyday!	To re-connect with yourself and your beliefs	Prayer, Gratitude, Religion, Community involvement
Creative	When you've not been prioritising self care	To make time for fun	Self-Care, Hobbies, Crafts, Things you Enjoy
Environmental	When you've been in the same environment for a long time	To change your surroundings	Get outdoors, spend time in natural daylight, open the windows and curtains

- Go easy on yourself.
- Take things slow and don't overdo it. Avoid multi-tasking.
- Ask for help and/or seek support if you are struggling.
- Complete more calming activities such as listening to music, meditation, gentle walking, yoga, pilates, tai chi, deep breathing, mindfulness or reading a book.
- Maintain social connections where possible, keeping interaction to a minimum if you are feeling fatigued or overwhelmed.
- Seek help with stress/anxiety to help to restore stress hormones to healthy levels.
- Reduce sensory stimuli – dim lights, diminish sounds, minimise distractions.

Cognitive Rehabilitation:

Cognitive rehabilitation typically involves training to help to navigate daily life. The focus of cognitive rehabilitation is on compensating for deficits alongside training in metacognitive skills such as observing thought processes; identifying situations where cognitive errors may occur and reflecting on how to approach a new task.

Exercising the Brain/Remedial Strategies:

Cognitive Function can be recovered through steady gradual practice. Completing brain exercises can challenge your mind, sharpen your cognitive skills improve your mental agility.

Adding a variety of enjoyable cognitive exercises and intellectual challenges into your daily schedule will stimulate the growth of neurons as well as strengthening interconnections and neural pathways within the brain.

- Aim to recover cognitive function through steady, gradual practice – start by reading simple newspaper headlines or short articles, or by reading for 5-10 minutes per day and progressing as able.
- Complete regular mentally stimulating games to stimulate the growth of neurons and interconnections in the brain. Cognitively stimulating and thought-challenging exercises include crosswords, chess, Sudoku, crossword puzzles and jigsaw puzzles, as well as board games, group games using strategy and problems solving skills.
- Learn (or teach) something new (language/hobby).
- Build your vocabulary by learning 1 new word every day.
- Engage the 5 senses (taste, touch, smell, sight, hearing).
- Pay attention – try to focus on 4 details when completing an activity.
- Listen to a podcast, short story or article and then summarise it in your own words afterwards.
- Use brain training apps and games: Researchers are currently exploring cognitive training through brain training apps played at home. A pilot study in 48 people recovering from Covid 19 suggests that puzzle-like cognitive games can improve attention and multi-tasking and are highly motivating. Brain training has its limits, but

emerging evidence supports its value in building attention and processing skills which are at the heart of many post-Covid 19 impairments.

- *Some recommended Brain Training apps include:*
 - *Lumosity – a popular app for brain training, with more than 100 million users. It offers a variety of games that are based on scientific research to help improve cognitive function. There are free versions available for Apple and Android, as well as options for paid subscriptions that allow for additional games and features. Lumosity is designed by neuroscientists to boost memory and attention spans, problem solving, speed and flexible thinking. Developers say that only one session per day can improve your mental skills.*
 - *Peak - If you want a problem-solving app with activities that don't require much time, the Peak app has more than 30 mini games. In addition to problem-solving, they also have short games that improve memory, language skills, concentration, and mental agility. It is available for both Apple and Android devices*
 - *Braingle - offers a wide variety of options to test and train your cognitive abilities, with more than “15,000 brain teasers, riddles, logic, mind puzzles,” according to the product’s site. It’s a bit more simple and lighthearted than other problem-solving sites, and users can submit games and puzzles. It also has a community forum function if you’re interested in chatting with other users.*
 - *Elevate - The Elevate app lets you pick a more systematic way of training your brain to be better at problem-solving. You can select from 3-5 games each day, and track your performance over time to meet your goals. Elevate has more than 40 short games to help with your brain’s processing speed, focus, memory, and more.*
 - *Cognifit - If you are interested in a more advanced problem-solving app, Cognifit is tailored to both individuals and professionals, including doctors, educators, and researchers. In addition to cognitive science-based mini games that train your brain to be better at problem-solving, it also offers neuropsychological assessments, real-time monitoring, and personalized training programs depending on your specific demographics or goals.*
 - *Fit Brains Trainer - This app claims to help you to think faster, with more than 360 games and puzzles that get harder as you improve. The app tracks your performance and will make recommendations based on your progress.*
 - *Eidetic - Want to be able to memorize phone numbers or birthdays? Eidetic uses facts you have entered yourself – such as your parents' phone numbers – and periodically tests you to help you memorize them. You can also use it to learn languages.*

Compensatory Aids and Strategies:

Compensatory aids and strategies are environmental or behavioural modifications which can be used to help you to perform your usual activities of daily living in an alternative manner.

Managing Sleep:

- Getting good quality sleep can help your brain to repair and recover.
- Ensure good sleep hygiene – 8-9 hours per night; regular bedtime routine; limit daytime naps; limit screen time before bed; limit caffeine/alcohol before bed etc.
- Empty the mind before sleeping using meditation/yoga (helps improve cognition)
- Speak to your GP re sleep tests/studies if you suspect Sleep Apnoea.
- Attend sleep hygiene programme via SRFT/Salford Health Improvement Service.

Managing Diet and Healthy Eating/Weight:

- Poor diet is linked with immune system and cognitive decline.
- A healthy balanced diet will support both cognitive and immune function
- *B Vitamins* (B3, B6, B9 and B12), *Omega 3 Fatty Acids* & *Coenzyme Q10* all play a role in supporting and preserving brain health
- Healthy diet = healthy brain. Try to eat a well-balanced, healthy diet to give your body the nourishment it needs to return to good health.
- Try to keep your BMI within a healthy range – between 18 and 25.
- Eat a range of good fats and dietary cholesterol to promote good brain health. 50% of your diet should include healthy fats such as nuts, avocados, coconut oil, olive oil, wild salmon, eggs, grass fed meat and omega 3 rich foods.
- Your diet should include:
 - High intake and variety of plant-based foods such as plant and animal proteins, vegetables, fruits, wholegrains, beans, nuts, seeds and legumes
 - Moderate intake of seafood, lean meats and dairy
 - Low intake of processed or refined foods – high sugar, salt, animal/trans fats, overly processed bread or pasta, junk foods and fast foods.
- Limit MSG aspartame, peanuts and dairy as these are possible culprits of brain fog.
- Limit vegetable oil, canola oil and sunflower oil as these are high in inflammatory Omega 6 fatty acids and can contribute to brain inflammation.
- Keep a food journal and limit any trigger foods from your diet.
- Try to pinpoint any foods that could be leading to inflammation – common dietary culprits are refined sugars, vegetable oils, processed meats and alcohol. Genetic analysis, blood tests and an elimination diet can indicate if you are susceptible, intolerant or allergic to common allergens such as proteins in dairy products, eggs and gluten.
- Avoid tobacco and alcohol. Staying away from tobacco products and alcohol can help minimize inflammation in your brain.
- Take a regular probiotic supplement to support your immune health.
- Eat plenty of anti-fungal spices like cinnamon, cayenne or garlic, as well as foods high in fibre.

Exercising the Body:

- Physical activity is not only beneficial to your heart and lungs, but also a great way to boost your brain function.

- Ensure regular movement and exercise of the body as this increases blood flow to the brain.
- Physical exercise can help to clear the mind of clutter and reduce cloudy thinking and negative thoughts.
- Aim for up to 30 minutes of mild to moderate gentle exercise per day such as walking, swimming, yoga, tai chi. Avoid heavy exercise as this may be too taxing and cause post-exertional malaise.

Managing your Breathing:

- See your GP/Consultant to optimise treatments for any respiratory conditions.
- Use/adopt breathing techniques to ensure you are breathing more efficiently and rhythmically. Physiotherapy can provide support with breathing exercises such as nasal or diaphragmatic breathing.

Managing your Mental Health:

- Do 1 thing you enjoy every day!
- Prioritise self-care.
- Remember to connect with your beliefs.
- Offload – counselling, journaling, ranting...
- See your GP who can arrange for referral onto Psychology Services.
- Consider e-therapy.

Increasing Social Contact:

- Reach out to family and friends.
- Attend social/support groups.
- Join online communities.
- Social prescribing via Wellbeing Matters.

Rewards/Self-Care:

- Self monitor – recognise your strengths and progress.
- Give yourself incentives or rewards.

TECHNIQUES AND STRATEGIES TO MANAGE COGNITIVE DYSFUNCTION

Attention and Concentration

What is Attention and Concentration?

Attention is the ability to focus on a task or subject and **concentration** is the ability to maintain this attention for a certain amount of time.

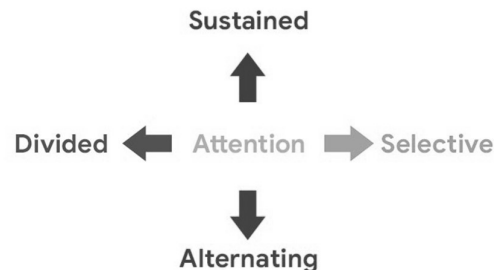
Why do we need attention and concentration in day to day life?

Attention and concentration is required to successfully complete a task and it is especially important when doing new activities.

If your attention or concentration is impacted, you may have the following difficulties in your everyday life:

- Remembering information (if information is not initially 'stored' or 'filed' well in your brain, it is harder to recall later)
- Maintaining attention when reading e.g. forgetting what you have read straight away
- Forgetting to complete familiar tasks properly e.g. forgetting to add milk to a cup of tea
- Being easily distracted e.g. by people talking around you or the TV in the background
- Not finishing a task that you have started.

What is involved in attention?



Alertness:

Time of day can affect alertness e.g. when you just wake up, or if you are feeling drowsy or unwell. If you are not alert things just don't 'register'.

Common Difficulties:

You may find that you don't notice when someone says hello to you, or are slow to respond.

Sustained attention:

Often referred to as your 'attention span'. This is the ability to maintain your attention, or concentrate long enough to complete the task.

Common difficulties:

It may be difficult for you to read large amounts of text and take in all of the information. You may need prompts from another person to complete a task.

Selective attention:

This is the ability to focus on the task you are doing and ignore surrounding distractions.

Common difficulties:

You may become easily distracted from a task if there is background noise e.g. the TV. - If you were having a conversation with a friend and someone next to you started talking, the extra noise may shift your attention from your own conversation.

Alternating or shifting attention:

This is the ability to shift your attention from one task to another.

Common difficulties:

When cooking, you may find it difficult to keep track of several things at once e.g. a saucepan on the stove and something in the oven. - Keeping track of 2-3 children in a busy playground.

Divided attention:

This is the ability to attend to two or more activities at the same time. Often called 'multi-tasking'.

Common difficulties:

Doing the ironing while watching TV, multi-tasking at work, e.g. talking to a person, writing an email or keeping track of the time to go to a meeting.

Techniques and strategies to improve your attention and concentration:

There are lots of simple techniques that you can use to help cope with attention difficulties. Many of these are 'common sense' and relate to blocking out distractions and practicing doing things in a slightly different way, but they can be very helpful all the same.

- Reduce interruptions or distractions – turn off phone, TV, radio. Use headphones/ear plugs if necessary.
- Find a quiet place and/or take time out from other people when it becomes overwhelming.
- Focus on tasks for a short time only and don't overdo it.
- Take regular breaks.
- Ensure a balance of work, rest and enjoyable activities.
- Start small - set realistic and achievable goals for yourself.
- Plan and prepare in advance.
- Organise your environment so that you have the correct tools for the task.
- Reduce clutter when doing an activity, e.g. clear the space before starting work.
- Block out sufficient time for tasks and don't leave things until the last minute.
- Write down all of the tasks you need to do breaking tasks down into smaller stages where needed.
- Plan activities one step at a time. Write down the steps to complete a task and tick off each step as you go.
- Say the steps of a task out loud.
- If you are interrupted by worries, it can help to write them down in a notebook to be dealt with at another time.
- Complete tasks when you feeling less fatigued.
- Monitor your progress. Take a break when your concentration is beginning to decrease.
- Balance work, rest and enjoyable activities.

- Keep things interesting - It's easier to concentrate on things that are fun, interesting, or rewarding.
- Try to stay engaged – take notes or ask questions to help you stay alert for longer.
- Try and decrease stress, worry and tension. Try to empty your mind to give the task your full attention.
- Learn to control distracting thoughts with deep breathing or grounding techniques.
- Learn different relaxation techniques such as meditation and yoga as these ensure a calm, but alert, state of mind, as this is the basis for optimum concentration.
- Complete activities such as arts and crafts which can help to focus the mind and improve your concentration.
- Check out music streaming platforms (You Tube/Spotify) for gentle instrumental music; or search for 'focus' and 'concentration' playlists.
- Discover what works for you – in which circumstances are you more and less able to concentrate? Which strategies work best for you?
- Tell people in advance if you are having problems with attention or concentration and how it is affecting you.
- Suggestions for reading:
 - Use contrasting colours to draw attention to important points or objects.
 - Cover up the words you are not reading.
- 'Control the Spotlight' technique:

Attention can be thought of as a spotlight on a theatre stage. Sometimes it's focused on one small part of the stage, and at other times it lights up the whole of it. Imagine that you have a task to do that needs your attention. You know that you need to keep your attention "spotlight" on the task just as the spotlight operator needs to keep focused on the leading actor. However they can easily become distracted and move the spotlight off the leading actor for a moment. Similarly, you may find that your attentional "spotlight" drifts away from the task you need to be concentrating on. This is very common, when you notice this has happened, don't tell yourself off – just gently move your attention back to the task. Try to get into the habit of checking where your attentional spotlight is pointing. With practice, you will begin to notice more quickly that your attention has drifted so be able to get back on task more quickly. This can work well particularly when used for short periods of time but can take practice.
- Activities to practice attention and concentration:
 - Read short stories or magazines instead of long books.
 - Computer and table top games (e.g. scrabble) encourage you to concentrate to complete the game. You may be able to gradually increase the amount of time you can concentrate on these activities.
 - Participate in interesting physical activities such as exercise and gardening.

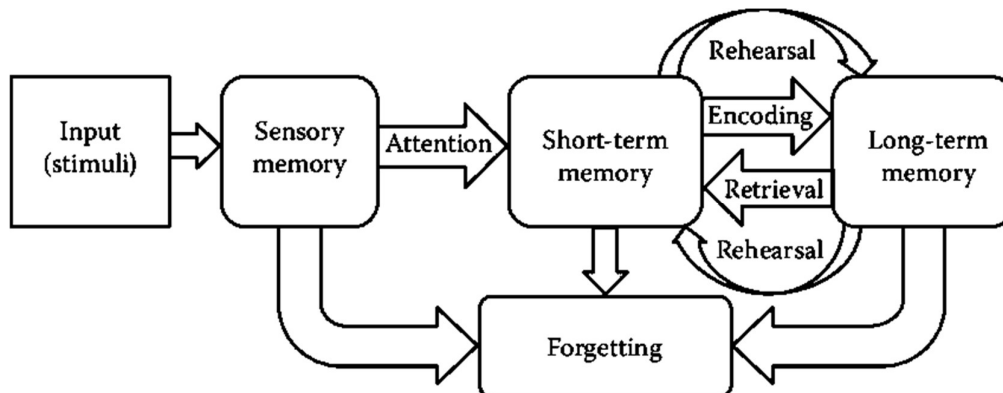
MEMORY



Memory is located in more than one place in the brain and is a complex process, which involves a number of skills and stages.

There are three key stages to memory:

1. Information comes into the brain from any of the five senses i.e. touch, taste, hearing, sight and smell. This information goes into the memory where it is held for a short time, usually a few seconds.
2. This information is processed by the brain and stored in the short term (working) memory just long enough to be used. It may be a few minutes, hours or days.
3. Information from the short term memory is processed and transferred into the long term memory where it can remain for a lifetime, and be retrieved when required. You may have problems with your memory if any of the above stages are not functioning properly.



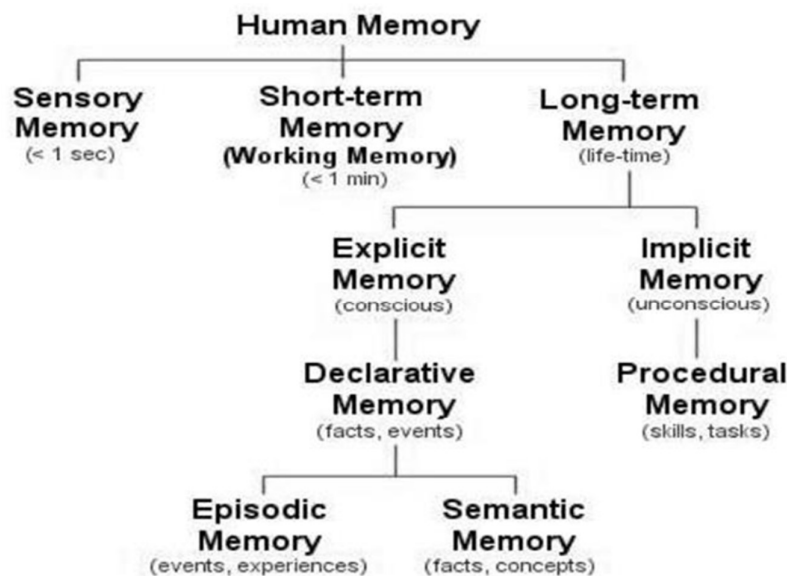
There are five stages involved:

- **Attention** – information enters the brain. If you cannot concentrate on information it will not be understood and stored.
- **Encoding** – registration of information at the time of learning. Emotional events or things you are interested in are usually more meaningful and therefore processed at a deeper level and become attached to existing memory structures.

- **Storage** – once information is encoded it is stored in the long-term memory e.g. as in a filing system or catalogue.
- **Consolidation** – information is repeated or practised otherwise it will be lost.
- **Recall** – also called retrieval, it involves recalling information, which is stored in the long-term memory.

Difficulties can occur at any of these five stages.

Different types of Memory



Immediate memory (sensory memory):

The first stage of memory where information is taken in through the senses.

Short-term memory (working memory):

Information is stored here just long enough to be used.

Long-term Memory:

Memory for things that have happened to you in the past. It is sometimes also called episodic memory or autobiographical memory e.g. your first day at work or your wedding day.

Declarative/Explicit Memory (conscious):

Declarative memory is also known as explicit memory, as it consists of information that is explicitly stored and involves conscious effort to be retrieved. This means that you are consciously aware when you are storing and recalling information.

Implicit/Procedural Memory (unconscious):

This is remembering things such as how to ride a bike, how to switch on a computer etc. These activities involve automatic mental or motor skills, which can be retrieved and put into action without conscious awareness

Prospective Memory:

Prospective memory refers to a person's ability to remember to carry out intended actions or do things in the future. It is remembering what to do and when to do it. Prospective memory can be for routine or novel events e.g. remembering appointments or planning a holiday.

Episodic Memory:

Episodic memory is the memory of every day events (such as times, location geography, associated emotions, and other contextual information) that can be explicitly stated or conjured. It is the collection of past personal experiences that occurred at particular times and places; for example, the party on one's 7th birthday.

Semantic Memory:

Semantic memory is the recollection of facts.

Everyday Difficulties with Memory

Some of the most common difficulties experienced by people with memory problems are:

- Forgetting what they have been told
- Forgetting peoples names
- Forgetting where they have put things
- Getting lost in familiar and unfamiliar places
- Forgetting a change in routine
- Forgetting to do something important
- Forgetting whether or not they have done something
- Forgetting appointments
- Asking the same question repeatedly
- Repeating the same story over and over again
- Inability or difficulty learning new things
- Inability to recall events of the day before
- Tendency to become confused more easily
- Difficulty following a television programme or the plot of a book
- Forgetting to pass on important messages
- Inability to remember verbal messages or directions
- Difficulties following a map
- Inability to remember episodes from family gatherings or events from life
- Difficulties remembering people's faces and where you've met that person before.

Techniques and strategies to improve your memory:

There isn't a way to restore lost memory, but it is possible to learn how to use strategies to aid your memory, these can be either external or internal strategies. When attempting to improve your memory use the following ideas to help you maximise your potential:

- Follow a set daily routine.
- Concentrate on only relevant information
- Reduce the level of distractions and noise.
- Make associations by linking the information to something familiar
- Don't be too critical of yourself
- Use strategies to assist you (see below).

Internal Strategies

Internal strategies are things that you 'do inside your head' to try and remember things.

The following are ideas to help you develop these internal strategies.

- Pay attention:
 - Focus on and pay attention to what is being said and try to reduce the background distractions.
 - Look at the person who is speaking.
 - Only hold one conversation at a time.
- Chunking/organising into categories:
 - Organise information into small amounts; break it down into chunks or categories rather than long streams of information.
 - This can be useful when remembering numbers e.g. 834564253 can be broken down into three small chunks 834 564 253 which may be easier to remember. This is useful with telephones numbers.
- Repeating/rehearsing information
 - Repeating information over and over in your head may help you to remember it.
 - Say things out loud to remind yourself of them.
 - Practice and rehearse things you want to remember and then test yourself after a short time – this process is called 'expanding rehearsal'. Repeat the information immediately then after 2, 4, 6, 8 seconds etc.

- Making links or associations
Try to make mental associations in your mind by linking new ideas to existing information.
- Visualisation:
Converting words into pictures can help you remember what is said to you e.g. if a friend asks you to meet them outside the chemists at half past one, you could make a mental image of your friend standing outside the chemists with a clock showing 1.30pm.
- Using W Questions:
If you are trying to remember something such as a magazine article ask yourself the five W questions. What? Where? When? Who? and Why? and break the information down into those categories.
- Stories and Rhymes:
Rhymes such as Richard Of York Gave Battle In Vain can help you to remember the colours of the rainbow Red, Orange, Yellow, Green, Blue, Indigo, Violet.
- First letter cueing:
This is helpful for remembering somebody's name. Go through the letters of the alphabet one by one and when you reach the first letter of the person's name, it sometimes prompts you to remember it.
- Memorise a short list:
To improve your memory start by remembering a short shopping list of 3 items; then increase this to 6, then 12, as able. Test yourself on it. This helps to strengthen the memory centre of the brain and compensates for any acquired deficits.
- Use Mnemonics and acronyms:
Use sayings, rhymes or drawings to help you to remember things more easily.
- Structure information:
If you need to remember a list of ingredients for a meal think of them under sub-headings such as starter, main, dessert, drinks etc.

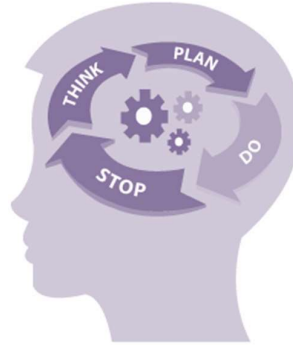
External Strategies

External strategies are alterations to your environment or routines that help you to function better by providing you with prompts.

- Write everything down. Write things on your hand.
- Use calendars, diaries and journals. Get into the habit of checking them regularly. Put them in a place you pass regularly.

- Use whiteboards/blackboards around the home/workplace. Put essential information on a noticeboard.
- Use virtual assistants such as Siri/Alexa/Google Home.
- Keep notes – via phone notes/notepad. Carry something with you to take notes.
- Record things using your phone (camera/video/voice recorder).
- Take photographs.
- Use timers (cooker timers/egg timers)
- Utilise a 'to do' list.
- Use shopping lists.
- Use alarms and reminders (phone alarm, watch alarm, memory aids).
- Leave objects in special places as reminders.
- Use prompts (post it notes, alerts, family, friends).
- Make lists of the steps required to complete different tasks.
- Organise home your home and workplace more efficiently – implement organisational systems.
- Label cupboards/storage vessels/doors as a reminder of where things are kept or stored.
- Keep a notepad next to the phone to write down messages.
- Use an answer machine. Use of an answer machine reduces the problem of messages being forgotten.
- Have a 'special' place to keep important objects such as keys, glasses etc.
- Attach important items to your person so they can't be mislaid – e.g. a neck cord for reading glasses.
- Use pill reminder boxes or medication aids to remember to take your medications.
- Telecare products via Occupational Therapist.

Planning & Organisation Skills (Executive Functions)



Executive functions are controlled by the frontal lobes of the brain and can be thought of as the conductor of the brain's orchestra.

Executive functions are thoughts that we carry out or “execute” as actions in order to reach a goal. Another name for executive functions is critical-thinking skills.

Executive function can be divided into two groups:

- **Organization:** Gathering information and structuring it for evaluation
- **Regulation:** Taking stock of your surroundings and changing your behaviour in response to it

Executive functioning skills help you to get things done and include:

- Managing your time;
- Planning and organising;
- Problem-solving;
- Multi-tasking;
- Paying attention;
- Switching your focus;
- Remembering things;
- Saying and doing the right thing;
- Thinking flexibly.

Difficulty with any of these abilities can cause problems with everyday life tasks.

Techniques and strategies to improve executive function:

Executive functions are the mental processes that allow us to solve problems, make decisions, plan ahead, and see tasks through to completion. Many of the strategies to help with attention and memory problems will also be helpful for people with executive function problems too.

People with executive function problems can find new situations and/or tasks particularly challenging to get started and to think through.

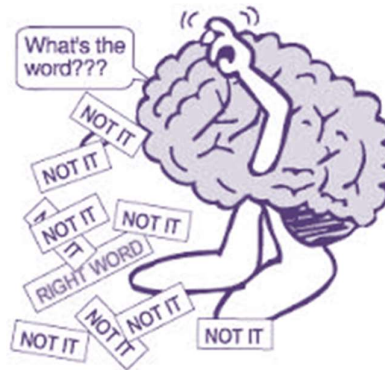
- Keep to a regular routine to reduce the demands on your brain. Our brain finds it much easier to do things that are familiar, practiced or part of a routine.

- When is your brain fog worse? Prepare in advance and set things out ready.
- Make a clear plan before completing activities.
- Use a step by step written guide when completing tasks and follow it.
- Plan ahead and prepare a detailed schedule for your week/day.
- Pick a time when you are most alert to do difficult/complex tasks.
- Do 1 thing at a time. Multi-tasking can lead to mistakes.
- Ensure your home and workspace are as organised as possible.
- Don't be too ambitious in case you fail to get through everything. Success feels better than failure.
- The 'Stop and Think' technique:
Develop a habit of pausing during complicated activities to clarify how the task is going:

Imagine you are cooking a meal for family or friends. You have planned well and have your recipe to follow. You have all your ingredients prepared and have started cooking. But you have lots of steps to do, and you may need to hop between tasks, perhaps stirring something in a saucepan, but occasionally checking how things are doing under the grill. This is a situation where your attentional spotlight might need to be moving from time to time. You don't want it to get stuck on one task when something else important now needs to be done. So, it is important to get into a **STOP:THINK** habit.

From time to time, take a moment and think – 'am I doing what I should be just now'? Is my attentional spotlight where it should be? Check the mental to-do list. What should I be doing just now? If your spotlight is in the right place, that's good! If it needs to be moved (perhaps to check the grill), then move it over, and then bring it back. Everyday life is full of tasks that have lots of steps, or situations where we have to switch to a different task, even if we haven't completed something. This can be at home or work – we are often having to manage multiple tasks at the same time. So, getting into a good 'STOP:THINK' habit helps keep the attentional spotlight in the right place, and move it when needed.

Communication and Word-Finding



Communication is another thinking skill that we all use day to day.

Having difficulty finding a word and feeling it is 'on the tip of your tongue'. We all tend to experience more of these 'tip of the tongue' moments as we get older.

However, occasionally people experience a significant word finding problem. This may result from damage to a specific area of the brain or may be due to problems in other thinking skills, such as the problems with attention, memory and thinking. It can also be harder to find the right words when we are tired, or in pain, or when feeling stressed. If you are experiencing word finding difficulties it is therefore likely that they will improve as your recovery continues.

Word finding difficulties can be distressing. If you can't find the word you want to use you might struggle to communicate what you want to. It can also have a significant emotional impact – many people with word finding difficulties find frustrating, or embarrassing.

Unfortunately, the more under pressure or anxiety you feel, the less likely you are to be able to find the word you are looking for. This can lead to people with word finding difficulties to avoid conversations altogether. This might mean avoiding meeting new people, or seeing people you haven't seen for a while, perhaps because of concerns about what others will think.

Our main tip is not to do this! If you avoid situations in which you may have word finding problems the most likely consequences are (i) that you may begin to feel lonely, and (ii) it could stop you finding good 'ways around' your word finding problems. **So – keep talking!**

Here are some other strategies you might find helpful when you can't find the right word:

- **Explain what is happening:**

Plan in advance a phrase you can use to explain the situation to people who do not know you well or may not be aware of the problem with words that you have. This might be something straightforward like:

"I have trouble finding the word I'm looking for sometimes, please give me a moment"

or more jokey

"I can't find the word I want - it's my brain playing tricks on me!"

- **Take control and be Assertive:**

- Let people know you've had Covid and how it's affected you;
- Let people know you are feeling tired and that you may need to keep communication to a minimum;
- Arrange interactions for when you are at your best;
- Ask people to repeat themselves;
- Ask people to give you more time;
- Ask people to slow down.

- **Delay! Do not rush, take your time and slow down.
Be patient with yourself and keep calm.**

Getting frustrated or worried only makes it less likely that you will eventually be able to find the right word. It might help to close your eyes and/or take a couple of deep breaths to help you relax if you find yourself getting worked up while trying to find a word.

- **Describe what you want to say**

Instead of searching for the one word you are looking for, is there a phrase that you can use instead? For example if you were having trouble finding the word "holiday" you could say "a few days away from home" or "a week in the sun", or something else that describes what you want to say. This is often easier than finding one specific word.

- **Use a related word**

Often we can think of a related word – saying it might help you find the right one, or help the person you're speaking to guess it (e.g. "do you know where we put the... not the lamps but the things that are like them...", which might lead you to the word **candles**).

- **Act it out**

You might be able to think of how you would use an object (e.g. 'I can't find my ___' [make the gesture of unlocking a door] to indicate the word 'key'). Use gestures – use your hands or body to act out the word, like charades.

- **Let it go**

Sometimes, the more you try the harder it can be to think of the word you are after. If you move on and stop trying to think of it, you may find it pops back into mind. Come back later – if you still can't think of it then it's okay to give up for now.

- **Use a first-letter cue**

It can sometimes help to go through the letters of the alphabet (in your head), as when you reach the first letter of the word you are looking for it sometimes allows the whole

word to spring to mind. Sometimes you might have a sense of what the first letter is, and saying this to the other person might help them guess the word you're looking for.

- **Use Synonyms:**

Try to think of an alternative word that means the same as what you are trying to say.

- **Other useful strategies:**

- Write it down or draw it – sketch a quick picture of what you are thinking of.
- Look it up – Google/dictionary/thesaurus.
- Narrow it down – give the general topic or category so the listener can try to predict.
- Use predictive text apps on a phone or computer.
- Practice in everyday life – have more conversations with friends and family.
- Join support groups – seek emotional support and tips from others experiencing difficulties with communication.

Finally, remember that everyone knows what it's like to occasionally struggle to find a word. They are unlikely to notice the problem as much as you do. Many people will be keen to help if you explain what is happening. Try to keep relaxed and use some of the strategies above.

How others are affected by memory & thinking problems:

- They may need to remind you of things you need to do, or point out if things are going wrong, or help you more than they used to.
- They may need to take on more of the day-to-day tasks if you are struggling with them (or not up to them at all).
- They may struggle to understand why you are having difficulties, or why you seem more forgetful, or slower. They may even misunderstand and think that perhaps you are 'not trying' or 'getting lazy'!
- They may not be able to accurately estimate your abilities – they may think you can do things you can't at the moment, or they may think you can do all the same things you used to.
- They may be feeling frustrated or annoyed about the changes that have happened.
- They may experience more stress associated with having increased responsibility.
- They may be feeling sad about the changes that have taken place.
- They may worry about you and/or how things might be in the future.
- However, as we have made clear trying to conceal problems is not helpful, and if anything is likely to lead to both you and people around you feeling more stressed. The old saying 'a problem shared is a problem halved' really applies here - we often fear most the things we don't understand or only know a little about, so opening up and talking things through can be extremely helpful, reduce stress and arguments, and lead to better solutions.
- Although people around you are also impacted by the problem, the good news is that they can also be an important source of support.

How others can help:

- Give the person you are trying to help plenty of time.
- Ask if they would like any help, or what sort of help (e.g. if trying to remember a word, would they like a clue or would they prefer you guess?)
- Don't 'jump in' too quickly – although this is usually meant kindly it can be horrible to be on the receiving end of this!
- Perhaps try working through a difficult task together rather than them taking over completely.

- Notice when things are done well as well as when mistakes are made.
- Offer prompts if you can (though be careful and try to work out the best style that works for you both, as this can be seen as interfering, or cause embarrassment).
- Try out different ways of helping, and talk about what has worked well and what has worked less well so you can, over time, develop the style that's right for you both.
- Read through this information together and see if you can find ideas you'd like to try out.
- Keep talking!

How you can help others:

- Try to think about things from their perspective.
- Encourage them to take some time for themselves – everyone needs a break, and new caring responsibilities can be really difficult to cope with.
- Take time to plan together and share out the tasks you need to get done according to each other's strengths and needs as they are at the moment. It might also be helpful to plan in enjoyable activities together as well as the things you 'need' to get done - it's so easy to lose sight of these things when you are struggling, but it's really important to keep them in mind and MAKE time for them!