**Attention and memory**

**What is attention?**

The ability to focus or concentrate on a particular thing.

You may have problems with:

- Shifting attention - switching between different tasks or demands
- Divided attention - multi-tasking or doing two things at once
- Sustained attention - concentrating for a period of time without getting distracted
- Selective attention - focusing on one thing and ignoring other things that are going on

Some researchers have felt that rather than a *deficit* of attention, people with ADHD have an *excess* of attention; they can sometimes hyper-focus for hours on something they are interested in, but at other times their attention is diffuse and scattered on anything and everything! Hyper-focus can be experienced as positive and helpful, although sometimes it feels compulsive and you cannot stop.

**What helps or hinders?**

**Motivation** – your level of interest in something, and the rewards or incentives involved in the task. You also need to believe that you can achieve something to feel motivated at all. Rewards, goal setting, or making things more novel or interesting all help motivation. Urgency created by deadlines is often a helpful drive (unless they stress you too much). Imagining yourself completing the task helps your motivation and performance.

**Anxiety** – can sometimes significantly disrupt attention and concentration. This is true for everybody, and the higher the anxiety, the greater the disruption to your thinking and performance. A small amount of arousal/anxiety is helpful as it increases attention and performance. This is
known as the Yerkes-Dodson law, illustrated in the diagram below, although in ADHD you may need higher levels of arousal to perform well, and you may become stressed more quickly at higher levels of pressure:

External Distractibility: You may find that almost anything can grab your attention and distract you. This could be something you find interesting or something which annoys you. You can easily get lost in apparently important detail and lose the thread of what you are trying to do.

Internal Distractibility: Thoughts can go constantly through your mind, leaving you unable to follow a particular line of thought or conversation.

Think about what problems you have with attention and concentration

Choose what you want to work on:

Do you neglect your partner because you hyper-focus on an interest, hobby or task?
Are you having problems with studying?
Do you find it difficult to work in your shared office?

Overcoming distractibility

Distraction by noise

- Listen to music (without words) to mask out other noises.
- Listen to white noise.
- Find ways of asking other people to be quieter around you.
- Use earplugs.
- Switch the phone to silent, checking for messages when convenient.
- Take your task to a quieter place.
Distraction by what you see

- Move notice boards and pictures away from where you are working.
- Make sure you are not facing the window when you are trying to work or concentrate; face into the room or the wall.
- Make your task more visually interesting with bright stationary, sticky notes or highlighter pens.
- Make a card for yourself, such as “Focus, stop daydreaming” and put it somewhere you need to be reminded of this, such as on your computer screen, or write it on your hand!

Practise ignoring distractions

Decide: “THIS is what I’m doing NOW!”

Categorise interruptions – internal thoughts or external events – as important or not important, making a mental (or physical) note to deal with important issues which arise – LATER, NOT NOW!!

Distraction by thoughts

- Learn to notice and regulate your thoughts.
- Try to make yourself aware of when you are not concentrating, and do not move on until you have re-focused on the task you are currently doing.
- Try to ignore distractions, and reward yourself when you have done so!
- If you are reading, when you lose focus, stop and remember the last sentence you remember. Say it aloud, or write it down, then continue reading.
- Have a piece of paper handy to write down any distracting thoughts that you do not want to forget.
Concentrating more effectively when you have ADHD

One of the theories about ADHD is that it is a **reward deficiency syndrome** – an imbalance in the reward system also implicated in problems like gambling and addictions.

Certainly, we know that people with ADHD do better with interesting and new tasks and need more rewards than other people. As someone with ADHD said, “Fun is a fuel for us!” Fun is a mental fuel that gives energy and motivation, so it is important to make tasks fun or more urgent or novel.

**Try goal setting** – set yourself small goals to meet the overall one. Make them *practical and achievable*, and make yourself complete them, not starting anything else until you do. Then reflect on what you have done and feel the sense of achievement you have in completing something. If you find this really hard, aim at something relatively easy first and build up.

**Create novelty and interest** – introduce novelty where you can, swap old tasks for new ones if possible or do things in a different way or place. Where you can do things you enjoy or find interesting, you will always do better.

**Use competition** – introduce a competitive element (e.g. “I’ll get this done in half an hour”). Create urgency with the artificial deadline of a timer going off.

**Give yourself rewards** – because you respond best to immediate gratification! Reward yourself for meeting each small goal, and give yourself a bigger reward for achieving the whole task. This could just be a tea break or a chance to walk around.

Don’t try to concentrate for too long at a time. Stop after, say, 15 minutes and do something different. It’s good to break regularly, but this needs to be disciplined (e.g. “I will make a drink and return to this”).

Sometimes you just have to make yourself concentrate even when it cannot be made interesting.

**Attention without excitement – you can (or may need to learn to) tolerate some boredom**

Recognise the emotional reaction of boredom; labelling it often helps to defuse it. Do not use the emotion as a reason to leave the task.
Accept the discomfort of it and redirect yourself.

Find a way to finish at least some part of the task.

**Breaks** – Have regular breaks, especially in routine tasks. Schedule them for your ‘risk’ period (e.g. if you can usually concentrate for 30 minutes, have a break after 25 minutes and if possible do something active when you do).

**Self-talk** – Try talking to yourself (e.g. “Keep on task”, “Don’t even look”, “This is what I’m doing now” or “Finish this first”).

**Dealing with lapses of attention** – Try not to get cross with yourself when it happens – just accept it will. Try not to worry about what others will think, and have phrases to say like “I’m sorry but I have forgotten what I was saying.” Don’t be afraid to ask others to repeat what they said or go over information again.

Have a rule to finish what you start and always come back to the task if interrupted. Until it is finished you cannot start something new.

**Can I train my mind to concentrate better?**

Many people try brain-training programmes like Luminosity (www.lumosity.com) or Cogmed (www.cogmed.com), which promise to improve attention, memory and mental processing speeds. However, a recent review of all the research on such programmes indicates that although participants improve on the specific games and tasks they practice, there is not good evidence that this improves skills generally, or that this goes on to help in other areas of real life (Simons et al. 2016). This continues to be a matter of scientific debate, and obviously it is up to you.
whether you would like to try some of these programmes, but be aware that the claims made are not necessarily well established.

You may have heard of neurofeedback. This is a treatment in which you learn to improve control of your brain activity through biofeedback, altering your typical electroencephalogram (EEG) pattern to that of a focussed attentive state. There have been some promising results from this, but it is not yet widely accepted or recommended.

**Memory**

**Memory problems in ADHD**

Memory problems in ADHD are mainly due to problems with attention. After all, how can you remember something if you haven’t devoted your attention to it in the first place?

**How memory works**

For many years, research has suggested that information comes in from your senses into a *sensory store*. If you pay attention to this information, it is held in your *short-term or working memory*. Some of this, if it is important or interesting, will be passed on to a *long-term memory* store. Rehearsal (mentally repeating information), or thinking about information, keeps it in short-term memory longer, and makes it more likely to go into long-term memory.¹

*Long-term memory* is what most people think of when they talk about ‘memory,’ storing all the information you have, from a few minutes ago to many years ago. In people with ADHD, taking information into long-term memory may be affected by poor attention. Retrieval (finding things in your memory bank) may be difficult if information has been taken in in a disorganised manner.

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**So there are two main factors affect your capacity to remember things**

1. Did you attend to the information?
2. Did you store this information in an organised way?
Low mood and anxiety affects our concentration, which in turn affects memory, as we do not focus on the information we need to store.

When does your memory serve you well? When does it cause you difficulties?

Tools to aid memory

Diaries and calendars

Most people need some kind of diary, either in a book or on their computer or phone. Remember to write down appointments and plans and to check these arrangements regularly (e.g. every morning). Your phone can be set to alert you to appointments. Some apps will allocate travel time if you input postcodes (such as Google Calendar). It can also be useful to take a picture of anything you want to remember and use it as a screensaver.

Planning for the longer term can be a challenge for people with ADHD, but a yearly planner can help you with this, as well as to record what is coming up.

If you live with a partner or in a family, a shared calendar means that others can write up reminders to help you know what is happening and what everyone else is doing (e.g. a Halloween party on Tuesday, with a note that reminds you to buy the sweets and drinks).

Pen and paper/lists

If you cannot rely on your memory, there is no shame in writing things down! Always have a pen and paper on you to write down instructions or things to do.

It can be helpful to get into the habit of making lists. These will include daily lists of ‘things to do’ or shopping lists. This can help you feel more in control, and you will feel more motivated and pleased when you can tick things off. Many people make too many lists; stick to one book which you can keep with you and rip out the pages when you have completed them.
Voice recorders/answerphones
Some people like to keep a voice recorder on them to record any ideas they have or other things they need to remember. Alternatively, you can phone yourself and leave a message on the answerphone to remind you to do something later.

Reminder cards
Some tasks only come up once in a while, so it is difficult to remember what to do when it comes around again (e.g. filling in tax forms or using the bread maker). Write yourself a reminder card for what you have to do, and keep it in a specific and obvious place.

Clocks, watches and alarms
It is easy to forget the passage of time, so having clocks and wearing a watch is helpful, particularly if they chime or bleep to mark the hours. Smart watches are useful to set alarms to remind you to do things, like take your medication. Set your watch to vibrate if you have your phone on silent mode.

Key finders/tracking devices
These vary from simple devices which beep in response to a clap or whistle, to others using radio frequency devices, or which connect to your smartphone.

Mental memory strategies
Repetition
Repeating information (aloud or in your head) keeps it in your working memory for longer, strengthens it and makes it more likely that it will pass into long-term memory.

Even better, ask yourself about the information: “What was that man’s name?” again after 5 minutes, then 30 minutes, then an hour or longer. Every time you do this, the memory is strengthened even more.

Make a picture
Visual memory is often much more reliable than verbal, and making words or a message into a picture helps retention as it allows information to be encoded both visually and verbally. Images which are weird and wonderful are most easily remembered, so, for example, picture your brother emerging from an enormous birthday cake covered in cream to remember to send him a birthday message. You might link a series of pictures in a story to remember several things.
Aim for ‘deep level understanding’

Try to link new information to existing memories. For example, if a mechanic tells you that you have a problem with the camshaft on your car, and you understand the workings of an engine and know what a camshaft is, you are more likely to remember. If you have no idea what happens under the bonnet, the word ‘camshaft’ has no meaning, so you are less likely to remember it.

Making links or associations

Make associations in your mind, by linking new ideas to old information. If I introduce myself as Anne, you might make associations with other Annes you know, or think of the actress Anne Hathaway, Princess Anne or Anne Boleyn.

If you put information into meaningful groups (chunking), this also helps recall; for example, when shopping for butter, cheese and cream (think dairy items), and beans, custard and soup (think tinned items).

Mnemonics and music

These are memory tricks which abbreviate the information; e.g. Richard Of York Gives Battle In Vain (R = red, O = orange, Y = yellow, G = green, B = blue, I = indigo, and V = violet) is a time-honoured way of remembering the colours of the rainbow. You can make up your own such as NEWS = Newspaper, Energy bar, Water and Sandwich.

Music – If you make a little song or rhyme about the information, you will remember it better. (Just think of all the words to songs that you can remember over decades.)

Retracing your steps and problem solving

To find something you have lost, many people mentally retrace their steps. Think: ‘When did I last have it?’, ‘Where was I and where did I go next?’, or ‘Where might I have put it down?’

To remember a name, go through the letters of the alphabet as this can trigger recall.
Remembering what you read

People with ADHD often find that they can read an entire article or chapter of a book but not remember any of it – so frustrating!

The secret is to be active in reading – focus on making it meaningful, connect the information with what you already know, make notes or draw a diagram. Ask questions and read the material to find out the answers to the questions. Say them aloud to yourself and write them down (e.g. Who won a prize? What was it and what was it for?).

How not to lose things

*Have particular places* – at home or in your bag/pockets where you always keep things – especially important things such as your keys, phone or money.

Train yourself to *always put these things there*. Make a picture in your mind of putting them there. Build on routines that you already have; if you currently put your keys on the kitchen worktop when you get home, then start putting your wallet and sunglasses there, too.

*Check often* throughout the day when you are out that the items are where you put them. If not, look for them straightaway and return them to your designated place.

*Check around you, especially before you leave anywhere* – the office, the bus, a café – have you got everything? *Have a mantra: “Stop, look, check!”* If you tend to lose a particular thing like gloves, say to yourself “gloves” often when you are moving around, such as when shopping.

*Minimise* the number of things you take around with you.

In general, *follow a routine*, be tidy and avoid clutter.

Leave spare keys with someone!

Remember: there is no evidence that people with ADHD are less intelligent than others, although problems with attention can sometimes get in the way. Don’t label yourself as ‘stupid’ or ‘ditzy’; you will not always concentrate well, and may forget important things, but you can anticipate these ‘failures’ rather than be surprised by them or brood over them. Think of them as just an inevitable part, for you, of getting things done – but you may still get a lot of things done.