

## Alcohol and Drug Cognitive Enhancement (ACE) Program

# ACE cognitive impairment strategies

This document is for clinicians treating people for alcohol and/or other drug use.

This document contains an ordered description of strategies you can use with, or suggest to your client. This comprehensive list of strategies provides you and your client with strategies to help improve their attention, memory and thinking. It is recommended your client only practice up to three new strategies at a time, as too many will be overwhelming, and it will be difficult to establish which strategies are effective and if change has occurred.

You may wish to help your client write up a list of common issues that are affecting them, and work together to identify when this became a problem and how this affects their everyday life. It is important to get a clear idea of where the client is experiencing difficulties and the issues they feel are the most important to address.

You may wish to read through the strategies and work with your client to identify which strategies they have used in the past, and which ones they would like to work on and feel will be helpful in the future. Work with your client to document where they are now, and their goals for improvement. A version of this strategies document and a fact sheet is available for you to give your client.

## Brief executive function assessment tool (BEAT) item mapping

The strategies described have been mapped to the relevant items in the BEAT. This document has been designed to guide you to choose strategies that can assist in areas where your client had difficulties or scored poorly on the BEAT. Please note that these suggestions are not based on validated studies, however they provide a helpful guide for deciding which strategies may be the most useful.

## ACE strategies

**Attention strategies** help a person focus on what is happening right now and to finish a task they have started. These strategies focus on improving concentration during an activity, and on increasing the length of time a person can concentrate and work on one activity. These kinds of strategies are helpful if your client is struggling with staying focussed and on task, completing tasks in a timely way, or being able to concentrate on more than one thing at a time.

**Memory strategies** help a person remember information once they have been exposed to it. Memory is required to learn new information, learn new skills and change behaviour. These strategies are helpful if your client is struggling with remembering appointments, remembering shopping lists, finding their way to places, or finding their belongings.

If your client is unable to remember appointment times or has trouble organising themselves to attend, then this is an important first goal to work on.

**Higher level thinking strategies** help a person set goals and make plans to achieve those goals. They help a person solve problems and manage their emotions in a healthy way. These strategies are helpful to use if your client is experiencing difficulties managing intense emotions like anger and sadness, or difficulties planning for the future and achieving goals that are important to them.

The person will need to practice each of the strategies chosen for a number of weeks – it will take a while to get used to. Your client may keep track of progress using a log or journal and together you can review this regularly. You may choose to continue working on these strategies, adapt the strategies or choose different strategies to work on.

Once the person has improved and met their goals using the strategies in a certain area, you can then work together to choose another area to work on.

BEAT item		ACE strategies
1	Questionnaire	4,6,15,16,17,18,22,43,44,46
2	Trail making	4,6,17,18,19,20,21,22
3	Clock drawing	32–40,43–46
4	Figure copying	6,13,15,21,22,33–40,45,46
5	Word list learning	23–28,31,32
6	Attention span	1–14,16,18,20–28,41,42,45
7	Working memory	1,2,4,5,6,9,11,12,13,14,18,20,21,41,42,45
8	Attention span minus working memory	1,2,4,5,6,11,12,13,14,18,20,21,41,42,45
9	Motor series	3,14,17,18
10	Abstraction	41,42,46
11	Letter fluency	35,46
12	Category fluency	
13	Letter fluency minus category fluency	35,46
14	Word list recall	23,24,25,26,27,28,31,32
15	Reading	
16	Naming	
17	Delay discounting	43,44
18	Visual memory	26,29,30,31,37,38
19	Incidental learning	23,24,27,28,31,32
20	Prospective memory score	24,26,27,28,31,32

Attention strategies		BEAT items
<b>Focused attention</b>		
1	Reduce sound and visual distractions.	6,7,8
2	Avoid busy environments (for example, peak times at shops or cafés).	6,7,8
3	Use self-talk (tell yourself to 'focus' every so often).	6,9
4	Identify 'difficult' and 'helpful' environments for working (for example, 'difficult' may be working in a noisy space, and 'helpful' may be doing important work at a time you can concentrate, such as first thing in the morning).	1,2,6,7,8
5	Find a place to work that is free from distractions.	6,7,8
6	Use a 'do not disturb' sign or be clear about your need to be free of distractions.	1,2,4,6,7,8
<b>Attention span</b>		
7	Summarise what people have said to you to make sure you have understood correctly.	6
8	Ask the person to repeat what they have said when needed.	6
9	Write things down, draw pictures or symbols, or use shorthand to gather important information.	6,7
10	Break down complex information into smaller chunks.	6
11	Mentally repeat the information you have just been given.	6,7,8
12	Use aids, like a calculator, calendar or mobile phone, to process more complex information.	6,7,8
13	Allow more time to scan new environments to 'take it all in'.	4,6,7,8
<b>Sustained attention</b>		
14	Change activities regularly.	6,7,8,9
15	Set times for regular rest breaks.	1,4
16	Complete more important tasks when it is easiest for you to focus.	1,6
17	Sometimes low level stimulation may help (for example, TV or radio on low volume in the background).	1,2,9
18	Reward yourself after concentrating for a set length of time or finishing a task.	1,2,6,7,8,9
<b>Divided attention</b>		
19	Work on only one thing at a time. Complete tasks fully (including packing up) before moving on to the next task.	2
20	Remove competing distractions altogether (for example, turn down TV volume when on the phone).	2,6,7,8
21	Avoid busy environments.	2,4,6,7,8
22	Ask for help when required.	1,2,4,6

Memory strategies		BEAT items
<b>Internal strategies</b>		
<b>23</b>	<p><b>Elaboration</b></p> <p>If you want to remember something new that someone has told you, spend some time thinking about it as deeply as possible.</p> <p>You can do this by:</p> <ul style="list-style-type: none"> <li>• linking the information to what you already know</li> <li>• thinking about how this information came about (for example, 'how do we know this?')</li> <li>• asking yourself as many questions as you can about the information (what, who, why, where, when and how?)</li> <li>• spending time thinking about it (the more time you spend thinking about it, the stronger the memory will be)</li> <li>• explain it or teach it to someone else in your own words (paraphrase).</li> </ul>	5,6,14,19
<b>24</b>	<p><b>Repetition</b></p> <p>Rehearse and practice what you need to learn. If you repeat information a few times after learning it, you can greatly increase your chance of remembering it.</p> <p>For example, if you have difficulties remembering people's names, after asking for their name, use it during the conversation, and introduce that person to somebody else.</p> <p>Ask people to repeat important information.</p>	5,6,14,19,20
<b>25</b>	<p><b>Chunking</b></p> <p>Reduce the amount of information into chunks that are meaningfully connected.</p> <p>For example, if you are trying to remember a shopping list, break it down into meaningful categories of items, such as Italian food (pasta, oil, pasta sauce, garlic bread), bathroom supplies (toilet paper, soap, toothpaste) and treats (chocolate, ice cream).</p>	5,6,14
<b>26</b>	<p><b>Visualisation</b></p> <p>Imagine a visual image to link information to be remembered.</p> <p>Pick out the features or characteristics of the individual that stand out the most to you. For example, to remember Mr Hill (who happens to have a wide forehead), you could imagine his forehead as a hill with a tree sticking out the top.</p>	5,6,14,18,20
<b>External strategies</b>		
<b>27</b>	<p>Write things down. You can do this in a notebook, diary, on a calendar or on sticky notes.</p> <p>If using this strategy, make sure you organise the information clearly. Otherwise you will forget where you wrote the important information down.</p> <p>Ensure you have a routine for checking this information at regular times (for example, after breakfast, lunch and/or dinner).</p>	5,6,14,19,20
<b>28</b>	<p>Use electronic devices, such as a smartphone, watch, tablet computer or personal computer for appointments and reminders.</p>	5,6,14,19,20
<b>29</b>	<p>Put everyday items in a set place (for example, glasses, wallet, phone).</p>	18
<b>30</b>	<p>Label the contents of cupboards and drawers.</p>	18
<b>31</b>	<p>Write lists or signs that act as reminders for tasks.</p>	5,14,18,19,20
<b>32</b>	<p>Set up a daily routine.</p>	3,5,14,19,20

Higher level thinking skills strategies		BEAT items
<b>Planning</b>		
33	Set aside a regular time to plan your activities for the next day (usually the start or end of a day).	3,4
34	Write down the steps needed to finish a task and put them in the order they should happen. Use this as a template for producing and using a checklist.	3,4
35	Develop a list of things to do and then order them by priority.	3,4,11,13
36	Develop and use a weekly timetable.	3,4
<b>Organisation</b>		
37	Keep things in their proper locations.	3,4,18
38	Pack things away when finished with them.	3,4,18
39	Make sure you have enough space before working on a task.	3,4
40	Have 'a place for everything and everything in its place'.	3,4
<b>Abstract thinking</b>		
41	Ask for examples when learning new things.	6,7,8,10
42	Ask someone to 'show' rather than 'tell' you.	6,7,8,10
<b>Impulse control</b>		
43	Use the Stop-Think-Do approach. <ol style="list-style-type: none"> <li>1. Stop.</li> <li>2. Think about the options/consequences.</li> <li>3. Do the most productive/least destructive of these.</li> </ol>	1,3,17
44	Remove items that are distracting or tempting, or move yourself or your attention away from them.	1,3,17
<b>Problem solving</b>		
45	Break down tasks or problems into smaller chunks and work on them one at a time.	3,4,6,7,8
46	Use the PIE (Plan-Implement-Evaluate) approach. <ol style="list-style-type: none"> <li>1. Plan your approach to a task.</li> <li>2. Implement your plan.</li> <li>3. Evaluate whether you achieved your desired outcome.</li> </ol> If not, start PIE again.	1,3,4,10,11,13