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Behavioural modification strategies for general practice

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This second article in the 'Psychological treatments in general practice' series describes a number of behavioural modification strategies and provides patient handouts for use in general practice.

Behavioural modification approaches (including slow breathing and muscle relaxation exercises, sleep-wake cycle management and activity planning) can be integrated into routine general practitioner care, and are beneficial for patients with a range of common mental and physical problems. More in-depth behavioural therapy approaches such as exposure techniques[1] have not been covered in this article.

There are many good reasons for GPs to acquire skills in teaching behavioural modification strategies. For example, the general public indicates a preference for psychological interventions over pharmacological treatments and in particular highly rate approaches such as relaxation exercises and activity planning.[2,3] These techniques can be taught within a short timeframe and do not require a significant shift in the usual relationship between the GP and the patient.[4] Importantly, there is some evidence that such techniques are effective in assisting patients with common mental health problems, especially when used in combination with other treatments.[5,6]

Behavioural strategies are suitable for patients experiencing common mental health problems such as depression and anxiety, especially when those disorders are associated with somatisation.[5,6] The behavioural strategies can be tailored according to the clinical pattern of presenting symptoms. For example, patients with panic or somatic symptoms of hyperventilation such as palpitations, chest pains and tightness, peripheral tingling and dizziness are most likely to benefit from slow breathing exercises. Those patients with somatic symptoms such as muscle aches and pains and headache may benefit from muscle relaxation exercises, while activity planning is best targeted at those patients who have withdrawn from their usual activities and consequently spend excessive time in isolation, ruminating, sleeping or watching television. The use of patient handouts provide a framework for GPs to teach these techniques and encourage patients to rehearse the strategies outside the consultation.

Slow breathing exercise

The slow breathing technique is a structured exercise designed to teach patients to slow their breathing rate using a clock

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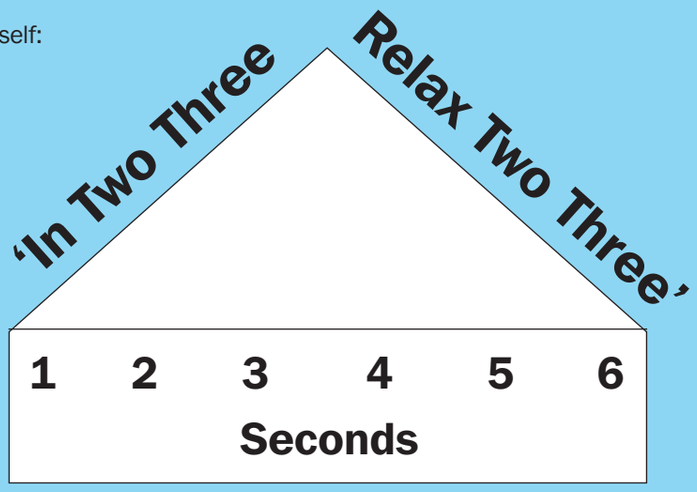
It is helpful to practise this exercise 3–4 times per day so that it becomes easy to use as a short term coping strategy during the times you feel anxious

1. Time the number of breaths you take in one minute (breathing in and then out is counted as one breath).
   Record your breathing rate here _____*

2. Hold your breath and count to five (do not take a deep breath).
   When you get to five, breathe in, breathe out and say the word 'relax' to yourself in a calm, soothing manner.

3. Start breathing in (through your nose) and out slowly in a six second cycle. Breathe in for three seconds and out for three seconds.
   This will produce a breathing rate of 10 breaths per minute.
   In the beginning it can be helpful to time your breathing using the second hand of a watch or clock.

4. Count to yourself:



5. Continue breathing in a six second cycle for at least five minutes or until the symptoms of over breathing have settled.

6. After you have practised this exercise, time the number of breaths you take in one minute.

   Record your breathing rate here _____*

Once you have mastered the slow breathing technique you do not need to keep timing your breathing rate before and after the exercise.

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Figure 1. Slow breathing exercise

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Table 1. Muscle relaxation exercise

1. Sit in a comfortable chair in a quiet room
2. Put your feet flat on the floor and rest your hands in your lap
3. CLOSE YOUR EYES
4. Do the SLOW BREATHING EXERCISE for three minutes
5. After three minutes of slow breathing, start the muscle relaxation exercise: tense each of your muscle groups for 10 seconds, then relax for 10 seconds, in the following order
   - Hands – clench your hands into fists, then relax
   - Lower arms – bend your hands up at the wrist, then relax
   - Upper arms – bend your arms up at the elbow, then relax
   - Shoulders – lift your shoulders up, then relax
   - Neck – stretch your neck gently to the left, then forward, then to the right, then to the back in a slow rolling motion, then relax
   - Forehead and scalp – raise your eyebrows, then relax
   - Eyes – close your eyes tightly, then relax
   - Jaw – clench your teeth, then relax
   - Chest – breathe in deeply, then breathe out and relax
   - Stomach – pull your tummy in, then relax
   - Upper back – pull your shoulders forward, then relax
   - Lower back – while sitting, roll your back into a smooth arch, then relax
   - Buttocks – tighten your buttocks, then relax
   - Thighs –push your feet firmly into the floor, then relax
   - Calves – lift your toes off the ground, then relax
   - Feet – gently curl your toes down, then relax
6. Continue slow breathing for five more minutes, enjoying the feeling of relaxation
7. As you become better at relaxation, it can be more interesting to combine these stretches with memories of relaxing situations (eg. lying on a beach, doing a favourite activity)

A full session of relaxation takes about 15–20 minutes

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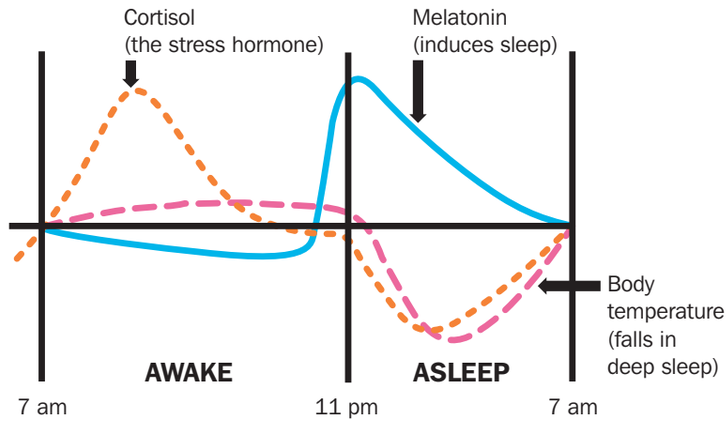

Figure 2. The hormonal body clock Source: Hickie I, Scott E, Morgan H, et al. A depression management program: Incorporating cognitive behavioural strategies. Melbourne: Educational Health Solutions, 2000; 37. Copyright 2000. Educational Health Solutions. Reproduced with permission

to count their breaths. The purpose of this technique is to:

- help patients become aware of their own breathing
- help them understand the link between the effects of hyperventilation and their physical symptoms, and
- provide them with a new skill for preventing and mastering hyperventilation in stressful situations.

The GP begins by demonstrating the technique to the patient using a handout (*Figure 1*). The patient rehearses the exercise during the consultation and is asked to practise the slow breathing exercise four times a day for the first week. As many patients are unaware of their own hyperventilation, it is important that

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Table 2. How to improve your sleep

There are a number of things you can do to improve your sleep. These include:

When you wake up

- Get out of bed as soon as you wake up – do not go back to sleep or try to make up for 'lost sleep'
- Try to get up at about the same time each morning, approximately 7–7.30 am
- Go outside into the sun (no sunglasses!)
- Do some physical activity, like walking to get the newspaper

During the day

- Do not nap. If you nap, you will be less tired when you go to bed, and will probably take longer to fall asleep
- Keep a sleep-wake diary
- Review your sleep-wake progress with your doctor at each visit
- Try to be active in the early morning or late afternoon – it helps to set your body's daily clock

Late afternoon

- Avoid drinking caffeine after about 4 pm, and try not to drink more than two cups of caffeine type drinks each day (eg. coffee, strong tea, cola)
- Be active while the sun is up

Before going to bed

- Avoid going to bed too early – it is not the right time for deep sleep
- Go to bed at approximately 10–10.30 pm
- Avoid using alcohol to help you sleep. As the alcohol is broken down in your body, it causes you to sleep less deeply and to awaken more frequently
- Do not smoke within an hour or two of going to bed. Smoking stimulates your nervous system
- Do not go to bed hungry or with a full bladder
- Regular exercise can improve your sleep, but avoid vigorous exercise late in the evening
- Allow yourself time to wind down before going to bed. If you are working or studying, stop at least 30 minutes before bedtime and do something relaxing in this time
- Use your bed only for sleep and sex! Avoid reading or watching television in bed because by the time you turn off the light, your body may be restless since it has already been lying in bed for a while
- Avoid taking sleeping pills. If you do need to take sleeping pills, try not to take them for longer than a week because they can be addictive

While you sleep

- Try to make your bedroom quiet, dim, and cool
- Avoid too many blankets and electric blankets – if you are too hot you do not go into a deep sleep. You will also have more nightmares

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patients are asked to record their breathing rates before and after the exercise, and the importance of practising the exercise is reinforced to the patient. The record will also help them recognise the reduction in the breathing rate over the course of the exercise, and over the course of the week. The slow breathing technique is designed to be used as a short term coping strategy. It is important however, that the technique does not become a crutch (or safety behaviour) where the patient uses the slow breathing technique believing that they will be 'saved' from a catastrophic outcome such as fainting or collapsing.[7]

The slow breathing technique integrates well with other behavioural and cognitive approaches. It can be used to help patients relax when undertaking the muscle relaxation exercise (*Table 1*) and attention to breathing is a common feature of many of the meditation based techniques. One of the most useful applications of the slow breathing technique is in the management of anxiety disorders to help patients decrease their fear of panic attacks by learning that they are able to exert some control over their anxiety symptoms.

Muscle relaxation

Muscle relaxation is a step-by-step approach to reducing muscle tension

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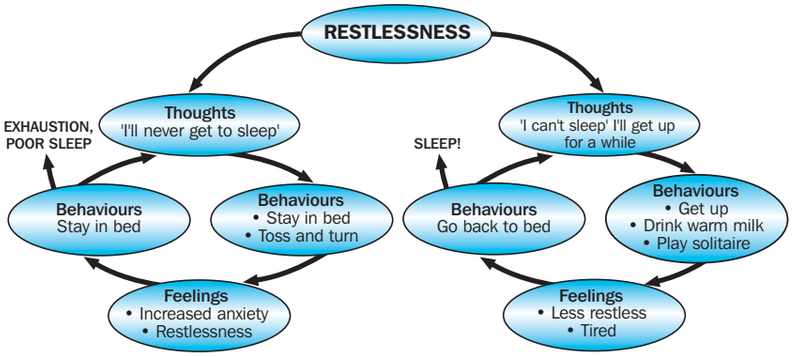
1. Get up if you cannot sleep after trying for 15–20 minutes. Staying in bed when you are feeling restless and anxious is unlikely to result in sleep
2. Do something quiet and distracting (eg. cards, reading, jigsaw, knitting, warm bath). If your mind is very active or you are worrying about problems in your life, it may be helpful to engage in an activity that requires some degree of mental effort (eg. a crossword). By distracting yourself from your worries, you may find it easier to wind down and become sleepy
3. Go back to bed when you feel more relaxed and sleepy.



4. If you are still awake after a further 15–20 minutes of trying to get to sleep, get out of bed again. Repeat this process until you fall asleep shortly after returning to bed.

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Figure 3. Steps to follow when you cannot fall asleep

Keeping fit
- ☐ Go for a 20 minute walk
- ☐ Walk the dog
- ☐ Jog
- ☐ Swim at a pool/beach
- ☐ Surf
- ☐ Play golf
- ☐ Ride a bike
- ☐ Go to the gym
- ☐ Aerobics

Entertain yourself
- ☐ Read the paper/magazine
- ☐ Read a book
- ☐ Do a crossword
- ☐ Write a letter

Socialise
- ☐ Invite a friend around for coffee
- ☐ Call in on a neighbour
- ☐ Ring a friend for a chat
- ☐ Take your children to the playground

Indulge yourself
- ☐ Have a massage
- ☐ Buy some new clothes
- ☐ Have a bubble bath
- ☐ Buy some flowers
- ☐ Paint your finger/toe nails
- ☐ Lie on the beach and read a book

Around the house
- ☐ Cook something new
- ☐ Fix something in the house
- ☐ Handicrafts
- ☐ Do some gardening
- ☐ Listen to a CD/radio
- ☐ Play with your children or pets

Away from home
- ☐ Check out the local neighbourhood
- ☐ Stroll through the shopping centre
- ☐ Go to the art gallery
- ☐ Visit a friend or family member
- ☐ Go to a market
- ☐ Go to a museum
- ☐ Go to the library
- ☐ Go to a movie
- ☐ Take your children to a park

Plan ahead
- ☐ Organise a dinner party
- ☐ Plan a movie with some friends
- ☐ Plan a BBQ
- ☐ Plan a weekend away
- ☐ Join a club
- ☐ Buy theatre or sporting tickets
- ☐ Do some Christmas shopping

- ☐ Other: _____
- ☐ Other: _____

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Figure 4. A list of pleasant activities

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(*Table 1*). It is useful for depression and anxiety as well as for patients with somatic symptoms associated with prolonged muscle tension. The GP talks the patient through the process, moving progressively through each of the muscle groups and encouraging the patient to tense and subsequently relax each region. Patients are encouraged to practise the technique twice a day, with the aid of the patient handout and sometimes an audiotape of the consultation. Muscle relaxation combines well with slow breathing and is sometimes complemented by visualisation exercises. It can also be a useful aid to enhancing sleep onset.

Sleep disturbance

Sleep disturbance (eg. insomnia) is a common presenting problem in general practice[8] and is often associated with significant emotional distress. Patients with depressive disorder often complain of difficulty getting to sleep, poor quality sleep, fewer hours of sleep, nocturnal awakening, early morning waking and day time tiredness.[7] Poor quality deep sleep can result in day time fatigue, irritability, aches and pains, reduced immune function, poor concentration and prolonged depression.[7]

While a full assessment is essential to determine the best management approach for individual patients present-

Activities	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Time of getting up							
MORNING 7 am							
8 am							
9 am							
10 am							
11 am							
12 noon							
AFTERNOON 1 pm							
2 pm							
3 pm							
4 pm							
5 pm							
6 pm							
EVENING 7 pm							
8 pm							
9 pm							
10 pm							
Time of going to bed							
Rate your sleep quality on a scale of 0–5 (0=bad, 5=excellent)							
Rate your mood today on a scale of 0–5 (0=bad, 5=excellent)							
Rate how tired you are today on a scale of 0–5 (0=very tired, 5=energetic)							

Figure 5. Work sheet for activity planning and sleep-wake cycle management
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ing with insomnia, simple behavioural approaches can be effective on their own or as an adjunct to pharmacological treatment. Educating patients about the body clock and circadian rhythm (*Figure 2*) emphasises the importance of activity and sunlight during the day and the avoidance of over stimulation before sleep. Practical advice can also assist patients to resume a normal sleep-wake cycle (*Table 2*). Patients with long term sleep problems may benefit from a different behavioural approach (*Figure 3*). Here, the underlying problem is often generalised anxiety disorder and chronic poor sleep hygiene habits that have caused a permanent shift in the patient's body clock.

Activity planning

Activity planning is a structured approach for engaging those patients who have withdrawn from their usual activities. Often, such patients are depressed and have lost interest in the things they usually like doing or which give them a sense of achievement. Similarly, patients who have experienced a significant medical problem (such as an acute myocardial infarction) or panic disorder, may be anxious about returning to physical activity. The consequential reduction in social contact, exercise and goal directed activity, and increased time in bed only worsens their depression and anxiety. The aim of activity planning is to help the patient plan their day in advance so as to enhance pleasure, achievement, social activity and exercise, while simultaneously reducing the negative experiences associated with rumination, procrastination, inactivity and guilt.

The GP asks the patient to identify those activities they have previously found pleasurable. Sometimes picking from a list of suggestions helps facilitate the process (*Figure 4*). Similarly, the GP helps the patient to identify activities that need to be achieved (eg. work or study), social contacts that have been overlooked and exercise goals. The patient then allocates these activities to the week's timetable. It is important not to be too ambitious and to encourage the patient to choose activities that he or she is likely to be able to achieve. Sleep-wake cycle strategies and practise of the progressive muscle relaxation exercise are often integrated into the activity planning sheet (*Figure 5*). The activity sheet is reviewed weekly with the GP. Some patients may prefer to use a diary than a worksheet.

Conclusion

Behavioural modification strategies can be readily integrated into routine general practice and can assist patients with common mental health problems.[5] They form a basis for proceeding to more complex psychological techniques such as structured problem solving,[9] cognitive behavioural therapy,[10] brief interpersonal counselling[11] and mindfulness based approaches[12] which are effective for treating a range of common disorders. The new 'Focussed psychological strategies' Medicare Benefits Schedule item number supports suitably trained GPs to deliver these interventions as part of integrated psychological care.[13]

Conflict of interest: none.

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