



Module 2

The Calming Technique: Breathing

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Introduction

In Module 1, we talked about the physical changes that can happen as a result of anxiety. One of these changes was an increase in the rate and depth of breathing. In fact, breathing plays an essential role in determining the body's level of arousal. When our breathing rate increases, a number of other physiological changes occur that contribute to an increase in anxiety. In this module, we'll discuss the fundamentals of breathing physiology to give you some idea about the role of breathing in anxiety. Then we'll talk about how you can start to gain control over your breathing.

An important first step in understanding and controlling your own breathing pattern is to monitor your breathing rate.

Check your breathing rate

Count your breathing rate for one minute, where a breath in and out counts as one breath.

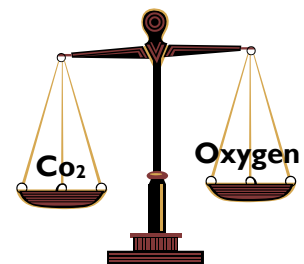
My breathing rate is _____ breaths per minute.

Breathing Physiology

We all need to breathe oxygen to survive. The lungs take in oxygen, where it is used by the body, and produces carbon dioxide (CO₂) which we breathe out. In order for the body to run efficiently, there needs to be a **balance** between oxygen and carbon dioxide. This balance is maintained through how fast and how deeply we breathe. Breathe in too much and the balance tips so that there's increased oxygen, breathe in too little and there's increased levels of carbon dioxide.

Importantly, we need different levels of oxygen and CO₂ depending on our physical activities.

- When we exercise, there is an increase in *both oxygen and CO₂*, so the balance is maintained even though the breathing rate has increased.
- When we relax *both oxygen and the CO₂* decreases, so the breathing rate decreases, again maintaining the correct balance.



When a person overbreathes, they are taking in more oxygen than the body needs. This upsets the balance between oxygen and CO₂. The appropriate rate of breathing when calm and relaxed is around 10 - 14 breaths per minute. *How does this compare to your rate of breathing?*

Most of the body's mechanisms, including breathing, are 'automatically' controlled, but breathing can also be put under voluntary control. For example, we can hold our breath when swimming, or speed up breathing when blowing up a balloon. Stress and our general mood also affect our breathing. By learning how to maintain a calm and relaxed rate of breathing it is possible to halt many of the symptoms that follow on from 'anxious' breathing. We'll discuss this more later on.

THE EFFECTS OF OVERBREATHING

So how does breathing cause all of those other unpleasant physical symptoms? When we overbreathe and the balance is tipped so that there is less carbon dioxide than oxygen, it signals the body to respond with a number of chemical changes. These changes lead to two main types of symptoms.

1. Firstly, some symptoms are due to the slight reduction in oxygen to certain parts of the *brain*. This leads to symptoms like dizziness, light-headedness, confusion, breathlessness, blurred vision;
2. Secondly, some symptoms are due to the slight reduction in oxygen to certain parts of the *body*. This leads to symptoms such as an increase in heart rate to pump more blood around, numbness and tingling in the extremities, cold clammy hands and muscle stiffness.

There are also other effects. Do you recognise any of the following?

- Overbreathing for extended periods of time requires more energy and effort. Prolonged periods of stress and anxiety may leave you feeling tired and exhausted.
- Overbreathing can leave you feeling hot, flushed and sweaty.
- Overbreathing might have led you to sigh or yawn a lot.

As with the other symptoms associated with anxiety, these changes are NOT HARMFUL.



FACTS ABOUT HYPERVENTILATION

- When a person is breathing very rapidly, or *hyperventilating*, they may experience these symptoms intensely. Hyperventilation can also be subtle – you might be breathing just a little more quickly over a long period of time. In this case, the carbon dioxide levels are lowered and all it takes is a yawn, or an anxious thought, and suddenly you're lightheaded, your heart's pounding, or you have a panic attack.
- Sometimes people might feel as if they are choking or they experience a smothering sensation, as though they are not getting enough air. In fact, it is the opposite - the person is actually getting too much oxygen!
- Remember that hyperventilation is not dangerous. In fact, it's often used in medical testing.
- Breathing patterns are an important part of the fight/flight response and are intended to protect the body from danger. If faced with a fight or flight situation, a state of overbreathing would not develop because the oxygen would be used at the rate it is taken in.
- Sometimes people are concerned that if they overbreathe for too long, they may eventually collapse or faint. Fainting almost never occurs as a result of overbreathing. When it does happen, it usually happens with people who have a history of fainting because there is often some other part of their biological make up that makes them more likely to faint.

CHEST BREATHING AND STOMACH BREATHING

Generally, when you breathe you either use (1) chest breathing or, (2) stomach breathing.

Chest breathing:

If you are troubled by anxiety in your life, chances are you're a chest breather. Chest breathing is shallow and often irregular and rapid. Anxious people may experience breath holding, hyperventilation, shortness of breath, or fear of fainting.

Stomach Breathing:

The second type of breathing is usually used by people with little anxiety in their life, or those who are coping better with anxiety. This stomach breathing (abdominal/ diaphragmatic breathing) is used by new born babies and sleeping adults. Breath is drawn in to the lungs and exhaled as the diaphragm becomes smaller and expands. Breathing is even and not limited. The breathing system is better able to do its job of producing energy from oxygen and removing carbon dioxide.

Breathing Awareness Exercise

Do you breathe with your chest or your stomach?

Place the hand you write with on the stomach between your lower ribs and belly button (navel). Put the other hand on the breastbone, just below the collarbones. Take a deep breath and notice:

"Which hand moves the most?"

"Did you breathe in through your mouth or nose?"

If you breathed through your nose, your stomach probably expanded first, with little upper chest movement. This is the type of breathing that is most helpful for your body. On the other hand, you breathed in through your mouth, your upper chest probably raised first with little or no movement under the hand located on your stomach. This would indicate an unhelpful breathing style and might be contributing to the anxiety you may experience.

Gaining Control Over Your Breathing

Gaining control over your breathing is an important skill to develop. This calming technique will help you to (1) decrease some of the physical cues that you might be sensitive to, and (2) facilitate general relaxation through your breathing.

Try to practise the following exercise as often as you can. When you start, practise in safe situations such as in the lounge room at home, or when you're waiting for a bus and so on. Once you've mastered the technique you can try to use it to reduce feelings of intense anxiety or panic. It's a bit like sport's practice – you want to master your skills before you get to the finals. For now, become as well practised as you can.

** Note: if you have breathing problems related to a physical illness, you should consult your doctor before doing breathing exercises if you have any concerns about the effects.*

BREATHING PATTERN

When you do the exercise, try to find a comfortable chair and eliminate any potential interruptions. Sit comfortably, without crossing your legs. How you breathe is important, so consider the following:

- Relax your shoulders and upper chest
- With jaw relaxed, draw air slowly in through your nose
- **Breathe in** by relaxing and expanding your waist so your stomach puffs up. Check you are using stomach/diaphragm breathing by using the breathing awareness exercise.
- Do not take in deep breaths just stick to your own natural depth of breath that is smooth and easy.
- **Breath out** through your mouth, and let the air 'fall' out of your chest as the elastic recoil of your lower chest and diaphragm breathes air out effortlessly.
- If you find it hard to keep breathing low and slow, place a book on your stomach. This will help focus your effort.

BREATHING TIMING

Once you're confident about your breathing pattern, it's important to concentrate on how many breaths per minute you are taking.

- Aim for a 4-in, 2-hold, 6-out cycle – breathe in for 4 seconds, hold for 2 seconds, then breathe out for 6 seconds
- If you have been breathing rapidly for some time, and this timing is difficult to start with, you might try a 3-in, 4-out cycle. Start with what you can most comfortably slow down to, and then work your way up to the 4-in, 2-hold, 6-out cycle.
- When counting, you can add the word 'hundred' after each number so it roughly equals one second - ie. one- hundred, two-hundred, etc.).

Remember to focus on the *evenness* of your breathing pattern. Breathing out usually takes slightly longer than breathing in, with a relaxed pause at the end of the exhalation.

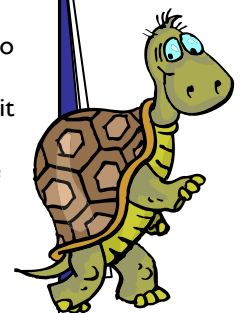
As you do the breathing exercise, try to keep count in your head – not only will it help to keep your breathing on track, it's also an important meditative aspect of the calming technique. What you might find if you stop counting is that your mind wanders, and it might wander right back to some anxious thoughts! If it does start to wander, though, just allow yourself the thought and then return to the counting.

BREATHING PRACTICE

With practice this new breathing pattern will eventually become second nature and a good habit. At first, if you've been using the mouth/upper chest breathing habit, you might find the nose-stomach breathing technique somewhat unnatural. It usually takes quite a bit of practice to train your stomach muscles to be accustomed to this kind of breathing. It is important not to be hard on yourself if you fall back into unhelpful breathing habits. It is far better to concentrate on both the next breath and getting it correct.

Turtle Tip

The trick really is to practise. It's like developing any habit or any skill, the more you do it the better you'll get at doing it.



Calming Technique

1. Ensure that you are sitting on a comfortable chair
2. Take a breath in for 4 seconds (through your nose if possible)
3. Hold the breath for 2 seconds
4. Release the breath taking 6 seconds (through your mouth if possible).

Try the calming technique now.

1. What was your breathing rate at the beginning of this module? _____ breaths per minute.
 2. Do the calming technique for 5 minutes.
 3. What is your breathing rate after using the calming technique? _____ breaths per minute.
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Monitoring your breathing

On the next page is a breathing chart for you to monitor your breathing rate at suggested times during the day, before and after using the calming technique. Print this chart out and try to use it over at least the next two weeks. If you cannot do it exactly at the times suggested, choose an appropriate moment around that time of day (e.g. once in the morning, once in the afternoon, once in the evening). The daily record of your breathing is designed to prompt you to practise the calming technique. As mentioned, practice is a key element in developing a more relaxed breathing rate that becomes your regular pattern of breathing and will be particularly important to help calm you in anxious situations.

Daily Record of Your Breathing Rate

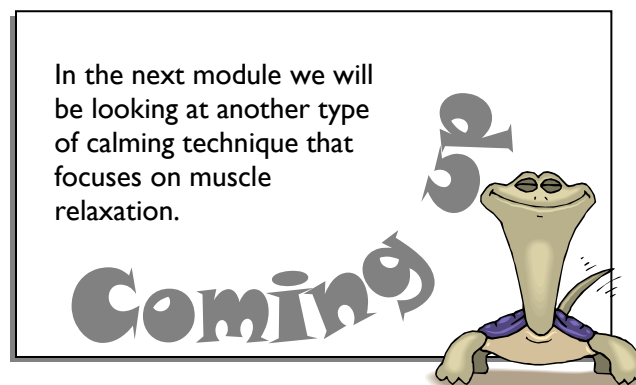
Instructions

- Monitor your breathing rate at the times shown below.
 - If you have just done some form of activity (e.g. walking upstairs, etc.) that increases your breathing rate, take your breathing rate about 20 minutes after you have finished the activity.
 - Try to be sitting or standing quietly when you count your breathing. Don't try to alter your breathing rate as you are counting.
 - Breathing Exercise: a) put your writing hand on your stomach and the other hand on your chest, b) breathe in through your nose and out through your mouth (2 seconds in, and 3 seconds out) Remember... jaw relaxed, breathe low and slow. c) Do this for approximately 5 minutes three times per day.
 - Remember to: 1) monitor your breathing rate, 2) practise the breathing exercise, and 3) monitor your breathing rate again.
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	10:00 a.m.		2:00 p.m.		7:00 p.m.	
Date	Before	After	Before	After	Before	After
↓						

Module Summary

- Breathing is a powerful determinant of physical state. It is the change in *balance* between oxygen and carbon dioxide that is important: when we overbreathe, we have too much oxygen compared to the amount of carbon dioxide. When the body detects this difference, it produces reaction that result in symptoms such as dizziness, breathlessness, increased heart rate, and muscle stiffness.
- The calming technique is a way for you to gain control over your breathing. It encourages you to
 - Change your breathing pattern, such as using stomach breathing instead of chest breathing
 - Change your breathing timing to slow down your breathing
 - Practise your breathing exercises so that your body becomes used to breathing in a more relaxed way
- The calming technique is a simple exercise that is best practised at quiet times when you have the chance to relax.
 1. Ensure that you are sitting on a comfortable chair or laying on a bed
 2. Take a breath in for 4 seconds (through your nose if possible)
 3. Hold the breath for 2 seconds
 4. Release the breath taking 6 seconds (through your mouth).



About The Modules

BACKGROUND

This module was created in 2003 by Patrick Kingsep at the Centre for Clinical Interventions, under the supervision of the Centre's Founding Director, Paula Nathan.

The concepts and strategies in these modules have been developed from evidence-based psychological practice, primarily Cognitive-Behaviour Therapy (CBT). CBT for social anxiety is based on the approach that anxiety is a result of problematic cognitions (thoughts) and behaviours.

REFERENCES

These are some of the professional references used to create the modules in this information package.

Clark, D. M., & Wells, A. (1995). A cognitive model of social phobia. In R. G. Heimberg, M. R. Liebowitz, D. A. Hope, & F. R. Schneier (Eds.), *Social phobia: Diagnosis, assessment and treatment* (pp. 69–93). New York: Guilford Press.

Heimberg, R. G. & Becker, R. E. (2002). *Cognitive-behavioral group therapy for social phobia*. New York: Guilford Press.

Rapee, R. M., & Heimberg, R. G. (1997). A cognitive-behavioral model of anxiety in social phobia. *Behaviour Research and Therapy*, 35, 741–756.

“SHY NO LONGER”

This module forms part of:

Kingsep, P., & Nathan, P. (2003). *Shy No Longer*. Perth, Western Australia: Centre for Clinical Interventions.