

Breathing Retraining for Trauma Survivors

Hyperventilation

A tendency to over breathe can be associated with anxiety. This can lead to hyperventilation and many of the unpleasant sensations experienced during anxiety and panic.

When we over breathe it disturbs the balance between oxygen and carbon dioxide (CO₂) in our blood; oxygen levels increase and carbon dioxide levels decrease. The drop in CO₂ brings about a number of changes in the system. First, blood vessels contract, limiting the supply of blood to the brain and body. Second, hemoglobin, the substance in the blood that carries oxygen around the body, increases its "stickiness" for oxygen. Consequently, not only does less oxygen rich blood reach certain areas of the body but it is also less likely that the oxygen carried by the blood can be released to the tissues.

It is important to understand that the reduction in the supply of oxygen around the body is very slight and not life threatening! It is, however, likely to be responsible for many of the unpleasant symptoms of anxiety.

It is also important to note that hyperventilation can be very subtle and difficult to detect. This is especially true if you have been slightly over breathing for a long period of time. There are at least three types of over-breathing. The first one is habitual, that is it occurs most of the time, and is basically an unhelpful breathing habit. The last two are episodic, that is, they occur during episodes of high anxiety or depression.

Types of Over-breathing.

1. **Chronic habitual over-breathing:** A slight increase in the depth or speed of breathing sustained over a long period of time. It may result in the person feeling constantly apprehensive, slightly dizzy and unable to think clearly.
2. **Panting or rapid breathing:** Tends to occur during periods of acute anxiety or fear. This causes a rapid reduction in carbon dioxide level and may lead to a panic attack.

3. **Sighing, yawning and gasping:** Tends to occur in response to negative emotions or thoughts and involves excessively deep breathing leading to mild hyperventilation.

Breathing Retraining Instructions*

*See Breathing Tools for additional strategies:

Recognizing Hyperventilation

The first step in preventing and controlling hyperventilation is to recognise how and when you over breathe. Try monitoring your breathing rate now. Time yourself for one minute using a watch that shows seconds and count the number of breaths.

One breath consists of breathing both in and out. It may be difficult at first, but don't try to change your breathing rate voluntarily. Time yourself for one minute and write the answer here

The average person needs to take 10-12 breaths per minute, at rest. If you are breathing more quickly than this, you increase the chances of hyperventilating and having a panic attack.

The key to relaxed breathing is to slow your breathing down. Often when people are frightened or upset, they start to breathe faster. This is a natural reaction and prepares the body to fight the threat or to run away. If you are not going to fight or run away, however, you may be taking in too much air and start to over-breathe or 'hyperventilate'. This causes unpleasant physical symptoms. What we need to do is to slow our breathing down and take in less air. We don't need to take a deep breath; we need to take a normal breath and exhale slowly. Breathing out is associated with relaxation, not breathing in. It is also important to try and breathe in through your nose, not through your mouth.

Three breathing techniques are outlined below. The slow breathing technique and diaphragmatic breathing should be practiced for at least a period of 5-10 minutes daily. Of course, the more you practice the better and the more you practice when you are not feeling anxious the easier it will be to apply these strategies when you need them.

Slow breathing technique (the "6 second cycle")

For chronic overbreathing

The "6 Second Cycle" teaches you how to take one breath (i.e. breathing in and out) every 6 seconds which represents 10 breaths per minute. If you breathe more than 10-12 breaths a minute, you increase the chances of hyperventilating and having a panic attack. The following steps teach you this technique.

1. First monitor your own breathing rate. Time yourself for one minute using a watch that shows the seconds. One breath consists of breathing both in and out. Divide this figure by 10 and you have a rough estimate of how many breaths you breathe per 6 seconds.
2. Now practice breathing in a 6-second cycle. Breathe in through your nose for 3 seconds, but try to breathe in slowly so that you only take a normal amount of air. Then breathe out through your nose or your mouth (whichever is more comfortable) for 3 seconds. Say 'relax' to yourself as you breathe out.
3. Now practice estimating a period of 6 seconds. First watch when each 6 seconds has elapsed on a clock. After you have done this for a while close your eyes, count to yourself, and open your eyes every time you think 6 seconds has passed. As your goal is to breathe approximately one breath every six seconds, now practice breathing in a count of three and out for a count of three while watching the clock, ensuring that this cycle is completed at 6 seconds.
4. If you are breathing very quickly (about 20 breaths or more a minute) don't force yourself to 10 breaths a minute in just one day as your body is used to breathing like this. Instead, gradually reduce breaths over a number of days. For example, set yourself a target for 17 breaths a minute the first day, 14 the next and 10 on the third day.

Slow breathing technique (the "6 second cycle")

To be done at the first signs of anxiety or panic

Do this before tackling a difficult situation, or any time when feeling tense or anxious. You may need to slip out to a quiet spot for a short time and complete this if you are in an anxiety-provoking situation.

1. Hold your breath and count to 4 (don't take a deep breath, just a normal one)
2. When you get to 4, breathe out and say the word "relax" to yourself in a calm, soothing manner
3. Breathe in and out slowly, using the six-second cycle; i.e., breathe in for three seconds and out for three seconds
4. Say the word "relax" to yourself every time you breathe out
5. After every 3-4 breaths, hold your breath again for a count of 4, then continue breathing in the six second cycle
6. Continue breathing in this way until all the symptoms of overbreathing have gone.

If you do these things as soon as you notice the first signs of overbreathing, anxiety, or panic, the symptoms should subside within a few minutes and you will not experience any panic attacks. The more you practice this slow-breathing, the better you will become at using it to stop any panic attacks. Sometimes, you will notice that symptoms of anxiety return after a short while. That's okay, just do your controlled breathing again for as long as it takes to settle.

Diaphragmatic Breathing

For those who breathe irregularly, sigh or yawn a lot

Your breathing should be light, regular and balanced between your stomach and your chest. During this exercise keep your lips together, your jaw relaxed and breathe through your nose.

1. Lie down on your back in a comfortable position and relax your stomach, shoulders and neck muscles
2. Place one hand on your chest, the other on your abdomen, with your thumb and pinky (little) finger touching
3. Relax your chest and stomach muscles and as the tension drops allow your breathing to slow
4. Without pushing let as much air out of your lungs as possible
5. Breathe as slowly and lightly as is comfortable. Adjust your breathing so that your stomach rises more than your chest with your chest rising only slightly;
6. Continue for a period of 5 - 10 minutes
7. Do this at least twice a day.

If you notice that you sigh or yawn frequently try to suppress any sighs and yawns whenever you notice them and ask family and friends to remind you when you are sighing and yawning in order to increase your awareness. Negative thoughts can cause you to sigh.