

ANXIETY, STRESS, AND BREATHING

Emotional status, anxiety, and stress can all have an effect on our breathing and well-being. As we are in the midst of dealing with COVID-19, many people are experiencing more stress and anxiety than they are typically used to and in times like these it is increasingly important to find some time for yourself and work keep yourself happy and healthy.

Let's start with some background. During states of stress and anxiety there is widespread excitatory activity throughout the body and brain that increases activity in the brain, increases heart rate, respiratory rate, blood pressure, skin conductance, and muscle tension (1). Research has consistently shown the negative effects of stress, negative emotions, and sympathetic dominance of the autonomic nervous system on health and well-being. When we are stressed or anxious our bodies are more predominantly controlled by the sympathetic nervous system, the one responsible for 'fight or flight'. When we are in this state, we tend to have more shallow breaths and breathe into the tops of our lungs rather than breathing deeply into the belly as with relaxed breathing. This can lead to a cascade of chemical changes in our body which are detrimental to our health and mental well-being (I'll spare you the details of this bit). The heart and lungs work closely together in what we generally refer to as the cardiorespiratory system. As we slow down our rate of breathing, the synchronisation between these organs improves, leading to a dominance of the parasympathetic nervous system (the 'rest and digest' state) and therefore a calmer state of mind and body.

There are many approaches to managing these changes including pharmaceutical approaches, meditation, exercise, mindfulness, etc. The difference in these is that relaxation techniques, such as meditation, target the mind and body as a whole rather than on the neurotransmitter systems which are targeted with pharmaceutical treatments. In this article I will focus on the non-pharmaceutical approaches to managing stress, though that is not to say that those may not be helpful for some people. Medications have the advantage of convenience, whereas meditation and breathing requires time and training to achieve.

In states of stress and anxiety, motivation for meditation practice may be low and negative thought processes can reduce compliance to regular practice. If this is true for you, try to focus on and appreciate the effort you are making to improve your health. Any effort is better than nothing and will have an effect. These practices are called that as they are a constant practice to strive to improve and maintain, there is no one method or requirement that suits everyone and life tends to get in the way of what we may consider ideal. Be kind to yourself throughout the process and if you drop off for a bit, just listen to your body and return to your practice when you are feeling ready.

For many, if anxiety is quite high they may find it difficult to try to lay still and quiet the mind in order to meditate. For these times it may be more suitable to engage in more active relaxation techniques focusing on the mind and body as a whole. Practices such as mindfulness, pranayama breathing (yoga), and music with exercise may be more suitable and all are shown to reduce the negative effects of stress and anxiety on the body.

Before we get into techniques for management, let's go through an activity that can help you check in with the effect of breathing on your heart rate. For this activity, find a comfortable position in sitting or laying and place one hand on your heart and one on your belly. Without changing anything, just notice how you are breathing. Is it mostly in your chest? Belly? How fast is your breathing and heart?

Next, increase the rate at which you breathe and try to breathe more into the tops of your lungs and make your top hand lift and lower. Notice what this does to your heart and rate and

tension of the muscles around your neck, jaw, face and shoulders. Now try to breathe into your belly. Slow your breathing down and try to keep your top hand still with your breath going into your belly as much as possible. Try counting to 2 as you breathe in, and 5 as you breathe out. Notice what now happens to your heart rate and muscle tension in your neck, face, shoulders, and jaw. Try to relax the jaw as you breathe – if needed, you can place the tip of your tongue against the top back of your front teeth to help relax your jaw.

In this exercise, the faster breathing pattern replicates what happens when we are stressed and anxious. What you should have felt is that this increases your heart rate and makes you generally tenser. This is that sympathetic or 'fight or flight' response. Staying in this state for long periods of time is detrimental to our health in many ways and is associated with poorer mental health, more stress on the heart, etc. By then slowing the breathing as in the second part of the exercise, we are increasing our parasympathetic or 'rest and digest' system leading to calming effects throughout the body. Below are some exercises and ideas they may help you in working on reducing these effects and increasing the parasympathetic or 'rest and digest' state.

Exercise suggestions:

1. Balance exercises or mindfulness with eyes closed. For these, find a safe place such as a corner that you can practice balance exercises. Stand with your back to the corner so if you lose your balance you will be caught by the wall. Stand in a position that challenges your balance and close your eyes (examples: standing feet together, standing on a pillow, tandem stance, single leg balance, etc.) As you balance here, try to focus on slowing your breathing and expanding your belly as you breathe. Breathe in through your nose and out through your mouth as much as possible. You are more than welcome to have one hand on the chest and one on the belly if you find this helpful. Try to work on this for 5 minutes or more before returning to your normal routine.
2. Exercising with music. This is generally most effective with cardio. For this, choose music that you enjoy and play this while you walk, cycle or run. The combination of music and exercise helps to calm the mind and body, especially if it is calming music you like, or a song you like on repetition which has been shown to have the most beneficial effects. Exercise increases the stress response while you exercise, and by adding music and breath awareness we can improve our parasympathetic recovery after exercise and stress to return to our relaxed state more quickly.
3. Yoga. Even short sessions of yoga, working on pranayama breathing can be helpful in resetting and calming your nervous system. There are heaps of resources and videos online for this ranging from 5 minutes to over an hour. Find an instructor/video you like and try to fit in some practice in the morning or before bed. Stretchy or spinal mobility practices are good calming options if doing them before bed to help aid with sleep.
4. Meditation. Meditation can be guided, done to calming music, or without any aides. In higher anxiety states something guided may be more suitable while trying meditation without any external assistance may be good for some of the more calm days. Focus on connecting to your breathe and relaxing progressively from head to toe or toe to head as you do this.

Mindfulness, meditation, and breathing techniques require practice to improve. Take your time as you learn and don't worry if you miss a day or two. Any effort into these practices is beneficial, even if you only manage a few minutes. Your mind set to these practices plays a large role in their effect and appreciating what our bodies do for us in hard times will keep us all happier and healthier. Keep active, listen to music you like, dance, do yoga, meditate, find your method and start to reconnect to your body as we cope with the crazy year we are having. If you want guidance on breathing techniques or any of these exercises we are back in clinic as normal and happy to assist you to find what will work for you.



We are available for appointments at both our Wynayrd and Britomart Locations. To book a consultation, give us a call at 09 930 9980 (Wynyard) or 09 919 2555 (Britomart).

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