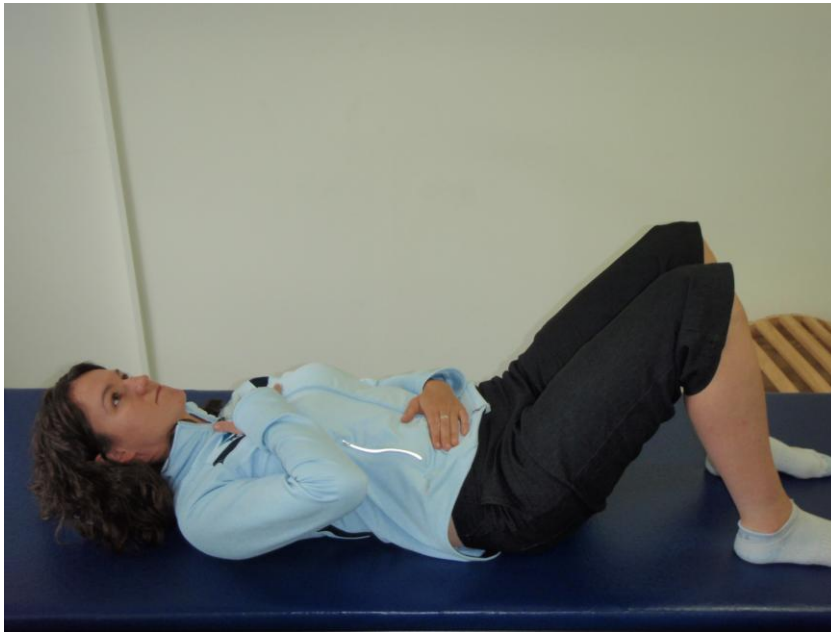


# Breathing Retraining

**10 minutes Daily**



- Lie on your back, both hands firmly on the top of your chest.
- First breath - breathe in through your nose, out through your mouth, pressing down on your upper chest as you breathe out. Feel the top of your chest deflate.
- All the rest of your breaths MUST be in and out of your nose.
- Keep the firm pressure on the top of your chest so that when you breathe, you cannot move your upper chest. Your stomach will move up as you breathe in and fall as you breathe out. This is not a push of your stomach, it just moves as your lungs expand and deflate.
- Try to breathe to the following 1,2,3,4 rhythm:
  - BREATHE IN for the count of "1",
  - BREATHE OUT for the count of "2 and 3",
  - PAUSE for "4".
- Aim for your out breath to be twice as long as your in breath with a slight pause after you breathe out.
- Initially start with 5 breaths in this rhythm, then revert to your comfortable breathing. Spend 10 minutes alternating between the correct pattern and your comfortable breathing.
- As you get used to it, try to breathe with the correct pattern for more breaths in a row until you can comfortably breathe for 10 minutes with the correct rhythm.
- Continue with 10 minutes every day. The correct pattern WILL get easier the more you practice.

## Gold Stars

- These are to remind you to correct your breathing through out the day.
- Put them in various places in your environment e.g. on your head stem, on your computer monitor, dashboard, phone etc.
- When you see one do the following:
  - Stop mentally what you are thinking about,
  - Drop your shoulders, upper chest and breathe out,
  - Take three normal size breaths into your stomach.
- It is very important that you do this to “reprogram” your breathing.

## When Exercising

- Try to keep breathing into your stomach for as long as possible. At some point you may revert to breathing to your upper chest but try to delay this as long as possible.
- When you breathe in, think of “sipping” the air in over your bottom lip. As you breathe out, blow the air out over your bottom lip as if blowing out a straw. Allow your out breath to become more forceful as exercise intensity increases.
- Try to keep your mouth opening as small as possible, for as long as possible.

## What You May Feel

When you start to change your breathing pattern it is normal for it to feel uncomfortable.

Some

people describe feelings like:

- Air hunger
- “not getting enough air in”
- “not breathing in long enough”
- Light headed
- Dizziness
- Needing to take a deep breath in after finishing the “correct” breaths.
- General discomfort

All these feelings are normal. When you breathe slower (correctly) your body is retaining more carbon dioxide than what it is used to. Usually when our carbon dioxide level gets too high we feel the need to breathe more (think about how you feel when you have held your breath as long as possible). It takes time for your body to adjust to the new carbon dioxide level. Over time these feelings will decrease and the new way of breathing will feel much easier. The only thing that will speed the change over time is spending your 10 minutes daily breathing with the 1,2,3,4 pattern, using your gold stars and trying to breathe to your stomach when you are riding.

Initially you may feel more out of breath as you exercise, or you may feel that it is harder to breathe when you ride. Again this is normal, as you are breathing through a smaller hole,

however this will also improve and the more you practice the quicker you will adjust.

### Why do I have to do my 10 minutes practice every day?

There are two parts to changing your breathing pattern. The first is the easy part and is as simple as learning to stride out more when you run. It is what we call a motor skill or technique. The gold stars are used as a reminder for you to be aware of how you are breathing and to correct your technique if necessary. It is important to break the habit of how you are breathing, and use the correct technique. This will be achieved through awareness of how you are breathing, and consciously changing to the new technique of breathing to your belly. It is important to use the visual triggers (gold stars). From experience you will not correct your breathing technique as often if you don't use them, and it will then be harder to breathe properly when you ride.

The second part is the hardest part as you need to reprogram the part of your brain that controls breathing. When you breathe incorrectly over a period of time your brain gets used to a certain level of carbon dioxide in your blood stream (usually a lower level) and bases future breathing rates and depths on this. Although you can override your brain's program (for example, holding your breath under water, or breathing really quickly on command), over-riding your brain's program can not be tolerated for longer than about 10 minutes. The only way you can achieve a correct breathing pattern long term is to reset the level of carbon dioxide that your brain responds to. This is why you do your 10 minutes of correct breathing! By consciously slowing your breathing rate, your carbon dioxide level will slowly normalise and you will be able to tolerate the correct breathing pattern longer. Combining the awareness and correction of how you are breathing (gold stars), with the tolerance to maintain this correct pattern, will help you breathe more efficiently on the bike.