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#### LOCKDOWN EDITION

## POSTURE AND breathing

When we thought of the title for this article a couple of months ago we didn't realise how pertinent it would be.

With the current outbreak of COVID-19 and the symptoms of shortness of breath that can be displayed, it is important to look at how our posture can affect our lung capacity.

#### Lung capacity and posture

A full lung capacity in a healthy person is dependant on the ability of the breathing muscle, the diaphragm, to expand fully. The diaphragm sits at the base of the chest separating the abdomen from the chest.

When we inhale the rib cage expands, the diaphragm contracts and moves downwards allowing air to flow into the lungs. When we exhale the diaphragm relaxes the lungs and ribs lower and the air is pushed out of the lungs.

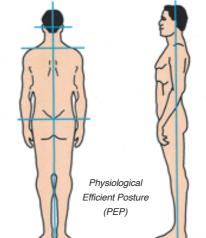
The angle of the ribs is very important as far as the position of the diaphragm is concerned. If we have an upright posture, whether this is



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8

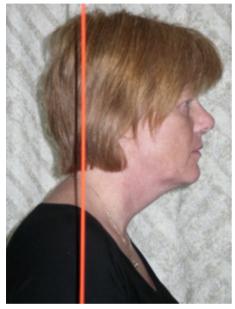
in a sitting or standing position, then the ribs can move easily along with the diaphragm. For maximum lung capacity, the ideal upright posture is known as the Physiological Efficient Posture.



#### **Physiological Efficient Posture (PEP)**

In this Physiological Efficient Posture (PEP) the ear is over the middle of the shoulder, middle of the hip and the middle of the knee. This allows the upper ribs, particularly the first rib which is situated under the collar bone, to move without any hindrance.

With a loss of the PEP, which normally results in a slouching or sagging, the head drops forward and down, this is known as a forward head posture.



Typical forward head posture

A forward head posture compresses the diaphragm and inhibits the movement of the ribs, resulting in reduced lung capacity. According to Dr Rene Cailliett M.D., author of the book, Rejuvenation Strategy, a slight slumping of the shoulders can reduce the lung capacity by as much as 30%.

#### Why is this important?

The main function of the lungs is the exchange of gases between the air and the blood. The main gases are oxygen and carbon dioxide. On the in-breath oxygen passes from the air into the lungs and on the out-breath carbon dioxide passes from the blood into the air. To have the maximum amount of oxygen in the blood we need the maximum lung capacity. The maximum lung capacity is dependant on having the best possible posture.

### Things you can do to improve your posture

Whether in the standing or sitting position take your chin backwards, it will feel like you are giving yourself a double chin. Repeat and perform the mantra 'head over shoulders and shoulders over hips'. Don't go mad and don't be too stiff. This will need regular reminders throughout the day so that it starts to become second nature.

For those of you who spend a lot of time at your computers, make sure you are facing the screen and the arms are at waist height, with the forearms level to the desk and keyboard and again keep checking on the position of the chin.

These two things will start to improve your posture and allow your body to increase your lung volume.

#### THE AUTHORS:

Sue Weller and Allyn Edwards, run a course for existing therapists on postural assessment and correction, called Core Postural Alignment W | coreposturalalignment.com

