

# KEEP CALM AND BREATHE DEEPLY

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**Hypertension affects about 26.4% of the adult population worldwide. It ranks as the leading chronic risk factor for mortality, accounting for 13.5% of all deaths. Hypertension is also closely associated with other chronic illnesses such as heart diseases and diabetes.**

Although not a cause of high blood pressure, under stress, our body produces a series of physiological changes that increase our blood pressure. Prolonged exposure to stress puts us at further risk of developing, or exacerbating already existing, high blood pressure.

One branch of these alternative approaches is relaxation exercises. It has been emphasised that these alternative approaches would not cure high blood pressure but could help to manage blood pressure more effectively.

The American Heart Association issued a scientific statement in 2006, that it is reasonable for all individuals with blood pressure levels >120/80mm Hg to consider trials of alternative approaches.

We introduce two relaxation exercises below that have been found to help in the management of blood pressure.

## Transcendental Meditation

Regular practice of Transcendental Meditation has been associated with significant reductions in both systolic and diastolic blood pressure. It has been suggested that Transcendental Meditation may have led to reductions in stress and physiological arousal, thereby producing favourable effects on the autonomic nervous system balance and hence the observed reductions in blood pressure.

### To do Transcendental Meditation:

- Sit in a comfortable position.
- Choose any word or mantra that is important to you and reflects your own belief system.
- Close your eyes and let your whole body relax for a few moments.
- Take deep breaths for a few minutes. As you breathe out, imagine the tension and stress draining away from your body and mind.
- Start repeating your mantra as you breathe out.
- Try focusing as best as you can on the mantra.
- You do not need to concentrate very hard. You are just supposed to breathe deeply and repeat your mantra as often and as best as you can.
- Do this for 15 to 30 minutes.
- Once more, breathe in...and now hold your breath. Hold...and relax.
- Continue to take regular breaths.

You have relaxed all of the key areas where tension can build up. Remember to relax these areas a few times each day, using this quick progressive muscle relaxation script, to prevent stress symptoms.





## Progressive Muscle Relaxation

Progressive Muscle Relaxation (PMR) was first developed by Jacobson. It is a systematic technique for achieving a deep state of relaxation. PMR has effectively reduced heart rate, pulse rate, systolic and diastolic blood pressure in hypertensive patients. In one study, the mean systolic blood pressure of patients reduced from 155.8 to 121.7. And the mean diastolic blood pressure of patients reduced from 92.7 to 79.9. These reductions in blood pressure corresponded with reductions in stress levels of patients by 19.5%

The actual Progressive Muscle Relaxation typically takes about 45 minutes to an hour.

### Here is a brief version of the Progressive Muscle Relaxation:

- Tense and relax each of the following areas. When you tense the area, tighten but do not cause pain.
- Neck and Shoulders. Raise your shoulders up toward your ears... tighten the muscles there...hold...feel the tension there...and then release gradually and let your shoulders drop.
- Hands. Clench your fists....hold...feel the tension in your hands and forearms...and release. Feel how much more relaxed your hands are now.
- Forehead. Raise your eyebrows, feeling the tight muscles in your forehead. Hold that tension. Squeeze your eyes tight, feeling the tension in your forehead and eyes...Hold it tightly...and relax... letting your forehead and eyes be relaxed.
- Jaws. Clamping your jaw shut tightly. Feel the tension in your jaws. Hold...and now relax. Release all of the tension.
- Breathe in deeply, hold that breath. Feel the tension as you hold the air in. Hold...and relax. Let the air be released through your mouth. Breathe out all the air.

### References

American Heart Association. (2013). Beyond Medications and Diet: Alternative Approaches to Lowering Blood Pressure. *Hypertension*, 61, 1360-1383.

Jose, R., & D'Almedia V. (2013). Effectiveness of Jacobson's Progressive Muscle Relaxation (JPMR) on Blood Pressure and Health Related Stress Level among Patients with Hypertension in a Selected Hospital of Mangalore. *International Journal of Nursing Education*, 5(2), 171-175.

**Relaxation exercises benefit both our physical and mental health. Do note that single-component relaxation exercises do not work but it is a combination of different relaxation exercises, stress management and medical treatment that jointly help to manage blood pressure better.**

