



## Alexander Technique for Preventing and Improving Low Back Pain

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Low Back Pain (LBP) is the first cause of disability in people under 45 years old and the second cause of referral to physician, and the third cause of surgery (Noori et al., 2011). In developed countries, the overall cost resulted from LBP is 1.7% of gross national product total share (Karimi, 2004). In general, the prevalence rate of LBP is 30%, but over 70-85% of people in advanced countries experience it at least once in their life (Nezhad Roomezi et al., 2012). In Iran, this problem is the third cause of disability in people aged ranging from 15 to 69 years. Since Chronic Low Back Pain (CLBP) is a multifactorial phenomenon, several suggestions are proposed for its treatment (Nezhad Roomezi et al., 2012). In this study, it was decided to introduce a less-known but effective technique in the treatment of CLBP.

Frederick Matthias Alexander was a theater professional actor in the northwest of Australia. After a while, he got into a sound problem and realized that his breath is narrowing, and his voice is terribly lost. The physicians did not see any problem in his vocal cords. Finally, Alexander thought to himself: "Maybe I am doing something which causes my voice to get lost". What he discovered was that whenever he opened his mouth to read the shown sentences, several events occurred in succession. He tightened his neck, pushed his head back, and pressed his spine. He was the first to realize that this body gesture affects the sound. Alexander understood that exactly at the moment that he opened his mouth to speak, he could choose not to speak, to pause,

and to stop himself from speaking or he could loose his neck and allow his head to rotate freely on the neck bones and activate a mechanism in his body in which the head went upwards, followed by the spine, resulted in obtaining his voice. His nine-year effort led to the formation of Alexander's technique and its principles.

The first principle of the Alexander technique principles is the relationship between the mind and body. The mind and body have a direct and close relationship to each other. The mind can be separated from body in no action. Have you ever had stomach pain or headache due to daily problems? In Alexander technique, nothing is really done. Instead of doing any kind of work, it is thought of. Regarding the brain structure, when we visualize something, due to the relationship between the brain and body anatomy, we can make physical changes in muscles structures and our movements. This is the basic principle of Alexander technique that to make a change. Therefore we must use our thinking because if you would like to correct our spine bad habits without using your thinking, it makes more muscle tension, and after a while, you get muscle tiredness, and the body tends to return to its previous wrong situation.

The second principle of Alexander technique is sensory awareness. An action or function that seems to be comfortable or familiar, even if the function is wrong, it looks right in the mind because it is accustomed to. For example, the habit of hunching or even sitting so flat would cause your mind to think that this is the right position.

The third principle states that habit change requires the "awareness of the habit". We think that if we do a work or move that would harm our bodies, we would know it. But some injuries are caused unconsciously by situating body in a wrong position for many years, in other words, by very small continuous blows; consequently, after a while, mostly in the third, fourth, and decades of

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life, low back pain, knee pain, neck pain, and so on are manifested.

Alexander technique helps us make our body movements consciously. In Alexander's technique, it is made use of the inhibition and direction, as the two most basic concepts, to achieve conscious control. When there is a trigger for wrong habits, inhibition helps us stop and think. It gives us the power to assess our body's condition. In inhibition stage, it is repeatedly and repeatedly said that I do not intend to do the intended activity whatever it is (walking, getting up from the chair, sitting on the chair, etc). After the inhibition stage, Alexander introduces four functional concepts or four directions in which individuals should give the direction of placing in the right position to themselves. There are four directions in Alexander technique: 1) let your head be comfortably upward and forward, 2) let your trunk be raised and widen, 3) let your legs go away from the trunk, 4) leave your shoulders outward.

When we think about these directions and imagine that we are using these four functional and useful concepts, we would experience a huge change in our body because they cause "conscious control".

The fourth principle refers to a major and common obstacle for gaining control. It is what Alexander calls "end-gaining". It means that we would like only to reach our important goals, for which we have learnt to work hard. We just focus on doing the work and getting a score for it. This makes us to pay attention only and only to the goal and not to think about our body posture; for example, "do my spine and body organs are in the right position while doing so?" Or "do I hurt my body or my spine while doing so?"

The fifth principle is the "primary control" or the "primary reflex". Alexander used this term to show the relationship between the head and neck, and the head and the rest of the trunk. It is important to know that there is a very balanced relationship between the head, neck, and trunk as a whole. we should see them in this view instead of seeing them apart and beside each other (a constant equilibrium). The head with its heavy weight is located on the smallest and thinnest part of the spine. The spine actually acts as a single unit. Thus, whatever head does, affects the entire spine. If we push our head back and down, it is possible to feel pain and pressure in

every part of our back; but by exerting inhibition and giving directions to ourselves, the pressure is removed from the entire spine. One of the most important things to do is to maintain a beautiful curvature in the spine. All of these events happens just by thinking and releasing the neck muscles which are important for protecting the head, holding the head, keeping the head balance, and allowing it to turn around.

Alexander technique has been widely welcomed in the UK, Australia, and the United States for the prevention and treatment of LBP. In these countries, schools were established, where Alexander's technique teaching certificate is given to graduates in a three-year period. It is said that this technique is a self-care and educational approach which facilitates the diagnosis and identifying the harmful habits and enables individuals to avoid them. This method makes use of hand touch along with oral explanations to teach people to place their head and spine in a situation so that the tone, balance, and coordination of the posture are normal.

Alexander technique lessons teach a continuous evaluation of individual patterns and correct musculoskeletal habits during mobility or steady state. They also pay special attention to the release of unwanted tensions in spine, head, and neck muscles. Alexander technique is therefore different from manipulating, back health training, and routine physiotherapy (Little et al., 2008). The technique can potentially reduce back pain by restricting muscle spasms, strengthening muscles, improving balance and flexibility, and removing the pressure on the spine. In 2008, the British Medical Journal published the results of a clinical trial study, indicating that Alexander technique lessons have long-term benefits for patients with back pain and are more effective than massage and exercise. The days with pain were 86% lower, and Morris's disability index was also 42% lower in patients who had received the Alexander technique than the control group (Little et al., 2008). In 1924, the British Medical Journal concluded that this technique is worth entering the medical profession (Tarr, 2011). This technique does not eliminate the main cause of LBP. it is a non-pharmacological and complimentary supplement with no side effect associated with medicine. By giving autonomy to patients, this technique can provide relaxation and an active and enjoyable life for them (Ehrlich, 2009).

A systematic review study showed that there is strong evidence for the improvement of non-

specific CLBP in patients using this technique while there is some modest evidence suggesting that back health program or back school is beneficial in the treatment of CLBP in work environments and causes people to return to work (Furlan et al., 2012). Another systematic review study provided strong evidence that teaching acute low back pain patients with this techniques is effective in their long-term treatment and full recovery (Engers et al., 2008). Because of the strong evidence supporting the patients' training with Alexander technique as an educational technique in patients with LBP, the introduction of this technique to practitioners in the country seems to be beneficial. On the other hand, in the developing countries, which are economically disadvantaged, and because this technique requires 40 training sessions to maximize its effect, combining this technique with incentive and self-learning methods in health education models can reduce the need for people's presence in Alexander technique clinics which are not available in the countries as well as decreased cost of using this technique for the patients.

Studies have shown that combining six Alexander technique lessons followed up with exercise was the most effective and cost-effective option (Hollinghurst et al., 2008). Therefore, in our country, the best teaching technique for patients is the use of educational aids and health education models along with teaching psychology techniques using advanced teaching methods, followed up by back exercises. It is also suggested that some overseas scholarships be provided by the Ministry of Health for trainees who would return to their country for public education after receiving the Alexander technique teaching certificate. It might seem that this technique has not been welcome in Iran because it works with the mind, and the mental changes are time-consuming. However, it should be noted that techniques such as yoga also work on the mind and are publicly accepted. Therefore, according to the author's research on female teachers in Tehran (Kamalikhah et al., 2016), the technique was very functional and attractive.

At the end it should be concluded that this technique can be entered into our country with the efforts of the practitioners. The use of this technique while teaching with health education and health promotion techniques can be facilitated for patients. Therefore, this effective

and non-invasive approach can improve and also prevent non-specific chronic low back pain.

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