The Healing Role of Breathwork for Depression based on the Polyvagal Theory

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In this article, I will describe the visceral background of depression for deepening the understanding of the role which conscious breathing can play in healing this disease. The various reasons of it in the personal history of people will not be covered here.

What can we learn from the polyvagal theory?

The polyvagal theory, discovered and developed by Stephen W. Porges, professor for psychiatry in Chicago, adds an important viewpoint to our ideas of the functioning and dysfunctioning of humans. Traditionally, we divide the autonomous nervous system into two branches, the sympathicus and the parasympathicus. The new insight is that the vagus (the tenth cranial nerve), the main operator of the parasympathetical nervous system, has split up into two different systems. The first one, which we share with the reptils, is the classical parasympathicus, responsible for relaxation and recovery as well as for freezing and total shutdown in a traumatic experience. The second, new one, also called the "smart vagus" or myelenated vagus, which can only be found in mammals, is connected to our functioning in social life. It controls the sympathicus by keeping the breathing rate and consequently the rate of the heart beat at a modest rhythm. It also controls all the muscles in our vocal organs, ear and face and in this way all our social expressions.

Our normal state of functioning is regulated by the smart vagus (Porges calls this state the *System Social Engagement = SSE)* and allows us to communicate and interact and helps us especially to perform optimally as parents with babies and infants. But any kind of inhibiting the flow of the smart vagus system, that is any kind of stress diminishes our ability to function open and easy in communication and social interaction. As soon as we come under pressure, the sympathicus gradually or momentarily takes over, as these three states of the nervous system work in a hierarchical order. When we lose this state due to challenge from outside or inside, we slip into the sympathetic state, which is run by the fight-or-flight mechanism. It allows the maximum of mobilization and is uses the stress system of our body. We start to intensify our breathing and our heart beat. In this state, our ability to communicate is drastically reduced. For example, the muscles in our middle ear need a relaxed state to be able to listen to the specific frequencies of human voices. In the stress state, our ears switch to listen to deep frequencies so we do not hear properly what other people want to tell us.

In case of extreme danger, when the fight-or-flight mechanism turns out to be useless, the ancient parasympathicus is turned on and we enter into a state of immobilization and freeze. Dissociation is a way in this state to stay partly conscious in the midst of terror. We lose the contact to our body and its fear and pain and enter into a realm of lightness and peace.

Polyvagal theory and depression

First, we try to deepen our understanding of depression by looking at the visceral level with the help of the polyvagal theory. Mental disorders like depression are primarily based on malfunctions of the vegetative nervous system. Sympathetic and parasympathetic states are prevalent while the states of the smart vagus are reduced. In the case of depression, a permanent level of stress keeps the person in ongoing unrest and nervous agitation while as well being unable to act in a determined way. Depressive persons often feel a lack of drive and motivation and are unable to relax on the other hand. Their sleep is often too long but not refreshing. Stress patterns have been observed in the brains of depressive people at sleep, while the dream phases are reduced.

So in the case of depression, the smart vagus system is unable to cope with the sympathetic branch of the nervous system. After stressful experiences, the smart vagus should apply the vagal brake which controls the sympathicus by reducing the heart rate and normalizing the breathing pattern. But traumatic experiences can damage or block the functioning of this brake and the activities of the sympathicus cannot be stopped when no longer needed. So the whole body stays in a state of over-activation and imbalance.

Instead of the smart vagus, it is the parasympathicus, which replaces the overactive sympathicus when its resources are depleted. The depressive person falls into apathy. In the case of a bipolar distortion, the phase of mania (overactive sympathicus) changes into the phase of low energy, flattened emotions and thoughts of self devaluation (parasympathicus). It has been measured that people with depression show a low vagal tone which indicates a malfunctioning of the vagal brake.

On the other hand, the always present sympathicus inhibits a proper functioning of the parasympathicus which is responsible for relaxation and regeneration.

Dominated by the mutual inhibition of sympathicus and parasympathicus, the depressive person is unable to use the smart vagus system. The consequences are the reduction of social life, the disability to feel empathetic towards other people and the centering on one's own suffering and agonizing self devaluation.

Breathing as a way to heal depression

As we have seen, the rhythms of heart beat and breathing are the key functions of the autonomous nervous system. Both are controlled by the vagus. The smart vagus is active when the breathing is relaxed and calm, the sympathicus runs the breathing when we are under stress: we take short and shallow breaths. Learning to improve our breathing means learning to use our vagal brake. Depressive people usually need to change two aspects of their breathing:

1) The strengthening of the inhale to expand the capacity of the lungs and of the oxygen metabolism. A stronger inbreath also symbolizes more self esteem and trust in oneself.

2) The relaxation mainly of the outbreath. This works as an effective brake for the sympathicus. We cannot be in a state run by the sympathicus and breathe in a relaxed way. So we find our way back to normal functioning by relaxing the breathing. A relaxed outbreath symbolizes accepting life as it is and trusting whatever comes.

Breath therapy means that we have to resolve all obstacles which are in the way of a deepened and relaxed breathing – suppressed feelings and blocked emotions. The traumas which caused the loss of

the vagal brake have to be accessed and healed. This can be a long and tedious way. But with every strong and relaxed breath, a good step is taken towards recovery. In any phase of the healing process, the client can use the breathing to overcome the miseries of depression in daily and nightly life.

As therapists, we provide additional help by building up a supportive relationship which is based on honest exchange and clear communication. Breathing freely ourselves, we show empathy and trust in the client`s innate resources. Thus we stabilize the work of the smart vagus and help our clients to regain their way to the free flow of breathing and to the free flow of life.

References:

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