Yoga and mental balance

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Exercise, breathing and attention support mental balance: they calm the nervous system and the stress hormones. Here is how yoga acts on mood.



> **Note.** Yoga, which brings together postures, breathing and meditation, complements therapy. Chakras and energy centres are concepts of traditional yoga.

People of the twenty-first century often live far from their own nature. Loneliness has become common, and with it many feelings that are not pleasant for us. Today we have countless ways of making contact, and yet we often feel alienated. We have less and less empathy and capacity for close relationships. Our life is turned towards acquiring material things, and the sense of fulfilment and connection is missing. Anxiety is on the rise because the system of values has changed, while we still need to give meaning to life and connect with others. We keep up relationships that do not rest on

real needs and emotional exchange, and so we are left without a kind word, a touch, an embrace. We turn to ourselves and neglect others. This can lead to anxiety, existential crises, a sense of emptiness and withdrawal, and in some to depression [1].

> ***Man has become an individual in himself, which is contrary to human nature: Aristotle already wrote that man is by nature a social being [2].***

We are used to feeling a certain closeness with our compatriots and the culture we come from, but often this closeness is only apparent: we feel safe because we are on familiar ground, yet we are actually far from one another. We cannot easily change the frame in which we live, but we can see our own world differently, re-examine our attitudes and adapt to circumstances, without putting up with what is unjust or illogical, instead looking for the elements that connect us with the values that matter to us. Every opportunity should be used for pleasant interaction and for giving our soul what it needs: closeness, warmth, an embrace.

What the research says

Yoga leads us to keep re-examining our own system of values and our own mental and physical strengths. When we practise asanas with correct breathing and enough attention, we influence processes in the body, and practice is linked with reduced stress and a better mood.

The most comprehensive review covered 12 randomised clinical trials with a total of 619 participants. It showed that in the short term yoga eases symptoms of depression compared with usual care [3]. So yoga has its place alongside therapy: it adds what medication cannot, our own active part in our recovery.

The eight limbs of yoga

Right at the start of practising yoga we can feel the benefits of several of the eight limbs of yoga described by Patanjali in the Yoga Sutras [4]. The principles described in them are still relevant today and can serve as a guide in working on ourselves. Patanjali lists nine obstacles of the mind: illness, dullness, doubt, carelessness, laziness, envy, wrong perception, unreality and instability, and four signs of unrest that accompany these obstacles: dejection, restlessness (anxiety), trembling and uneven breath.

The eight limbs (anga) are: *yama* (social code), *niyama* (personal code), *asana* (postures), *pranayama* (breath control), *pratyahara* (withdrawal of the senses), *dharana* (concentration), *dhyana* (meditation) and *samadhi* (complete absorption in the object of meditation). We do not have to know the Sanskrit terms to feel the benefit: while doing the postures we feel the stretching of the body, fast breathing “lifts” us and slow breathing calms us, directing attention to the breath draws in the senses, and making contact with the body leads towards meditation. Entering a posture or coming out of it can be refreshing. Everyone who practises yoga knows that there is a pleasant feeling before, during and after the practice.

Short-term effects

A single yoga class can change the chemistry of the brain. In a small pilot study GABA, the main calming neurotransmitter in the brain, was measured with magnetic resonance imaging. After 60 minutes of yoga its level rose by about 27%, while after 60 minutes of reading it stayed unchanged [5]. The study had 8 yoga practitioners and 11 comparison subjects.

Why is cortisol mentioned? When we are under stress, the hypothalamus in the brain sends a signal to the pituitary gland, and it to the adrenal glands, which secrete cortisol: a hormone that prepares the body to fight or flee. In the short term that is useful. If the stress continues, cortisol stays raised, and raised cortisol is often found in people with depression. In one Indian study, in which 54 patients with depression were followed for three months, cortisol was higher than in healthy people, and in those who practised only yoga it fell together with the symptoms [6]. A review of 25 trials shows that yoga helps to regulate this stress system [7].

When we exercise, the body warms up, breathing deepens and attention is directed to what we are doing. That is why after a class many people feel calm and at the same time have more energy than before exercising.

People who take antidepressants know that the effect does not come at once and that therapy must be taken regularly. The same is true of yoga: for the feeling of well-being to become lasting, regular practice is needed. Yoga has the additional value that it includes self-control, that is, the ability to take an active part in our own recovery. Self-control is not the same as willpower or abstinence; it is the ability to act consciously. While we practise, we do something for ourselves and rely on our own strength, which can help us free ourselves from the feeling of helplessness that accompanies depression.

Glands and chakras

The glands with internal secretion release hormones that reach the whole organism through the blood, so increased or decreased secretion changes both the body and the mood. Reduced function of the thyroid gland often accompanies a depressive mood [8], and long-term raised cortisol (Cushing's syndrome) leads to physical and mental changes [9]. It is therefore understandable that in yoga, which calms the stress system, the glands are spoken of with care.

In yoga the chakras are presented as a symbolic depiction of centres in the body, arranged along the spinal column, most often as lotus flowers. Their number differs from school to school [10]. More recently authors have linked them with the glands of the endocrine system:

- *ajna* (between the eyebrows): pituitary and pineal gland [11];
- *vishuddha* (throat): thyroid and parathyroid glands [11][12];
- *anahata* (heart): thymus [11][12];
- *manipura* (solar plexus): pancreas [12];

- *svadhisthana* and *muladhara* (lower abdomen and base of the spine): adrenal and sex glands, and the arrangement differs in the descriptions [12].

The seventh, crown chakra (*sahasrara*) is understood as the sum of all the others [12]. The chakras are a symbol from the tradition [11][12]. Attention, breathing and movement calm stress, and with it the stress hormones.

Long-term effects

After a longer time of practising yoga, short-lived changes grow into more lasting ones. The exercises help us stay focused and in touch with our feelings, be aware of the present moment and accept our thoughts and feelings as events in our own mind. The possibility of looking at ourselves from a slightly different, calmer perspective, of following our thoughts without too much burden, helps us to react more calmly.

That “calmer perspective” is neither a distancing from emotions nor suppressing them. Our emotional reactions can become livelier, not duller, which is the opposite of the state that accompanies depression. Over time we learn to slow down impulsive reactions and respond more calmly.

Today there are many styles of yoga: some include only postures, some breathing and meditation, and most all of that together with yoga ethics. Instructors differ too: some only observe, some give corrections, and some practise with the participants. Whatever the differences, regular practice reduces muscle tension, teaches us a natural way of breathing and can improve concentration, memory and general well-being.

About the module

The mental balance module is organised as an eight-class course. The classes include various yoga postures and complete yoga breathing, with attention directed to the processes linked with the endocrine system. The aim is to learn skills that help us feel better.

Photograph

Photograph: Yoga Loznica.

Sources

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