

A focus on breathing

Breathing dysfunction should be a primary concern to all practitioners and therapists involved in bodywork and movement therapies, since it represents an interface between mind and body over which the individual has at least partial control.

In order to offer readers of *JBMT* the most current and useful information in this vital area we have commissioned a series of articles to be written under the editorial guidance of Dr Chris Gilbert, a practising psychologist and an expert in this field. Dr Gilbert has listed some of the areas on which he will focus over the coming issues, and he has offered a brief outline of what the series will contain (see pp. 64–65).

The implications of the extremes of respiratory dysfunction, such as occurs in frank hyperventilation as well as more subtle forms of breathing imbalance, and which have a direct impact on the conditions treated by bodyworkers of all schools, include the following (Lum 1981, King 1988, Timmons & Ley 1994):

- the first and most direct response to hyperventilation is cerebral vascular constriction – reducing oxygen availability by about 50%
 - of all body tissues the cerebral cortex is the most vulnerable to hypoxia, which depresses cortical activity, causing dizziness, vasomotor instability, blurring of consciousness ('foggy brain') and vision
 - loss of cortical inhibition results in crying and emotional lability
 - loss of CO₂ ions from neurons during moderate hyperventilation stimulates neuronal activity, producing muscular tension and spasm, and speeding spinal reflexes as well as producing heightened perception (pain, photophobia, hyperacusis)
 - when hypocapnoea is more severe it depresses activity until the nerve cell becomes inert
- tetany is secondary to alkalosis; muscles that maintain 'attack–defence' mode – hunched shoulders, jutting head, clenched teeth, scowling – are those most likely to be affected
 - painful nodules develop and are easily felt in nape of neck, anterior chest and shoulder girdle
 - temporal headache centred on painful nodules in the parietal region is common
 - painful legs are present in some but not all patients
 - sympathetic dominance is evident by virtue of dilated pupils, dry mouth, sweaty palms, gut and digestive dysfunction, abdominal bloating, tachycardia
 - allergies and food intolerances are common because of an increase in circulating histamines
 - with such a pattern of breathing the accessory breathing muscles become overactive and tense and often develop painful local areas
 - interference with circulation to, and drainage from, the head can occur, with resultant lightheadedness, dizziness and possible headaches
 - the muscles being overused in the inappropriate breathing pattern are mainly postural stabilizing muscles (scalenes, SCS, trapezius, pectoral, levator scapulae), which will, with the repetitive stress involved in the overbreathing, become short, tight and painful and will develop trigger points
 - common sites for trigger points lie precisely in these muscles of the neck, shoulder and chest
 - the increased tension in these muscles adds to feelings of fatigue since the muscles are constantly using energy in a non-productive way, even during sleep
 - the poor breathing pattern leads to a restriction of the spinal joints that attach to the ribs, which are deprived of regular (each breath) movement, by shallow breathing, leading to stiffness and discomfort
 - the rib attachments to the sternum are also restricted, leading to pain
 - a similar lack of movement of the diaphragm leads to digestive organs missing out on a regular (each breath) rhythmic 'massage' as the diaphragm rises and falls
 - shallow breathing restricts the pumping mechanism between the chest and the abdomen, which normally assists in the return of blood from the legs to the heart – cold feet and legs can be aggravated by this
 - the intercostal muscles become tense and tight, with the likelihood of chest pain and a feeling of inability to achieve a full and deep breath.

Do you recognize any of your patients in these descriptions? In the experience of many clinicians, a cluster of these symptoms are to be found in most patients with a diagnosis of fibromyalgia and/or chronic fatigue syndrome (*Fibromyalgia Network Newsletter* 1994). Improvement of respiratory function in such patients can have a major impact on stabilization and recovery. By evaluating the possibilities offered by methods that focus on structural normalization as well as functional rehabilitation, and by incorporating those methods appropriate to individual treatment settings, a major enhancement should be achieved.

Leon Chaitow
Editor

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