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Indirect regulation of breathing: a detour may be fastest

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Background. Direct breathing regulation implies a goal-directed strategy to change specific aspects of breathing: frequency, pauses, volume, ETCO₂, resonance to heart rate, location etc. An alternative option is indirect regulation, which consists of strategies to modify determinants of breathing. The majority of instructions that we use are indirect forms of regulation. We use two main determinants: mental (direction of attentional focus) and mechanical (posture). The presentation will show how this is done and its effect on breathing movement and subjective sensation.

Method. A recording was made of five experienced practitioners, executing a simple movement, while sitting on a flat, horizontal surface (a stool), looking straight ahead, feet in front of the knees, hands on the upper legs. They moved front and back a little, while focusing on the shift of weight in the sitting bones, for about one minute. Before and after, breathing movement was assessed manually (MARM) and subjective changes afterwards were noted.

Results. The videos show an increased coordination between lumbar spine and chest bone, as well as improved balance of the head. Subjects noted to sit more firm and straight, to feel more freedom in the neck and more involvement of breathing in the chest. MARM showed an increase in the upper line ($p < 0.05$) and a lesser decrease in the lower line (ns), resulting in a larger area of breathing movement.

Discussion. An indirect procedure is a feasible option for breathing regulation.

Literature: Jan van Dixhoorn. Indirect approaches to breathing regulation. In: Leon Chaitow, Dinah Bradley, Christopher Gilbert, eds, Recognizing and treating breathing disorders. Churchill Livingstone, Elsevier, 2014, 155-161.

Key words: breathing therapy, breathing movement

An oral presentation is the only option since the presentation contains video's