



EDITORIAL

Reduced stimulation and pain management: General and manual



A therapeutic approach that focuses on simultaneous reduction of multiple environmental stimuli is known as Reduced Environmental Stimulation Technique – REST.

This involves immersion in a flotation tank filled with neutral temperature water (i.e. body heat), of an extremely high salt concentration to increase buoyancy. The individual floats, ‘weightless’, in this, with all external stimuli reduced, including sound and light.

In one study 37 patients (14 men/23 women) suffering from chronic pain, were randomly assigned to either a control group (17) or an experimental group (20).

The experimental group received 9 REST – treatments, over 3-weeks

- The most severe pain intensity was significantly reduced, but low degrees of perceived pain intensity was not influenced.
- REST treatment elevated the participants’ optimism and reduced the degree of anxiety or depression, while also improving sleep (Kjellgren et al., 2001).

In another study Edebol et al. (2008) have demonstrated the benefits of the REST method in the management of the chronic effects of whiplash injuries.

Dosage and gender

Bood et al. (2007) have shown that an optimal therapeutic gain is not necessarily enhanced by repetitive treatment.

Having achieved “considerable improvement” in a group of 37 individuals with “stress-related pain of a muscle tension type” after 12 sessions – no further gain was noted after a total of 33 sessions. Among the variables evaluated in this study were pain perception, blood pressure, as well as experienced stress, anxiety, depression, negative affectivity, dispositional optimism, and sleep quality.

Bood et al. (2009) have also demonstrated that there seems to be no gender difference in the responses to REST methods of individuals who had been medically diagnosed

as having chronic stress-related muscle tension pain. “The analyses indicated that the flotation-REST treatment had beneficial effects on stress, anxiety, depression, sleep quality and pain”.

Meta-analysis

In a meta-analysis of REST methods van Dierendonck and Te Nijenhuis (2005) noted:

“Twenty-seven studies published in 25 articles or book chapter were included in a meta-analysis. The total number of participants was 449, with a mean age of 29 years (ranging between 20 and 45). Sixty-four percent was male and 36% was female. The results showed that REST has positive effects on physiology (e.g., lower levels of cortisol, lower blood pressure), well-being, and performance. The pre–post mean effect size and the overall randomized control group effect size were relatively strong.”

These results suggest that flotation REST can be a useful stress management tool, together with, or independently of, other stress management methods.

Manual therapy versions of REST?

The objective of reducing – possibly noxious – stimuli, also forms a major element in a variety of manual therapy approaches – as seen in the range of so-called *positional release techniques*.

Manual modalities that incorporate the introduction of ‘comfort’ or ‘ease’, as major features of their methodology, include: Strain Counterstrain, osteopathic Functional Technique, Facilitated Positional Release, Balanced Ligamentous Tension, Sacro-occipital technique (chiropractic), McKenzie’s rehabilitation model, many aspects of kinesiotaping (‘unloading’), ‘wellness’ or ‘relaxation’ massage – and others.

The theoretical underpinnings for many of these modalities includes the likelihood that reduction of noxious

stimuli may allow for spontaneous, self-regulating, forces to operate more effectively (Wong, 2012; Howell et al., 2006).

For example It has been suggested that when a disturbed relationship exists between muscles and their antagonists, following strain, the positioning of these tissues into an unloaded, ease, position, may allow spindle resetting and partial or total resolution of inappropriate motor impairment (Kreulen et al., 2003; Huijing and Baar, 2008).

Seffinger and Hruby (2007) report – in relation to the *Balanced Ligamentous Tension* model, that:

“a commonly held theory is that positioning an affected joint in such a way as to minimize the ligamentous tensions around it (that is, achieving a point of balanced ligamentous tension) results in a reduction in afferent input from the affected joint structures to the central nervous system. This allows for the central nervous system to respond by reestablishing a more physiologic state of motor control of the joint.”

Seffinger & Hruby continue by noting the clinical effects of this reduction in stimuli: “Clinically, the patient perceives the neutral position as one where there is marked reduction or elimination of pain or discomfort, which persists when the treatment is completed.”

The similarity to the REST model is clear, even though the mechanisms remain speculative.

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