Self-Healing concept for musculoskeletal pain management: An evidence-based review

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International guidelines are commonly integrating complementary and integrative approaches into the management of musculoskeletal pain. This improves overall well-being while concomitantly reducing the reliance on conventional pharmacological treatments and the associated risk of side effects.

cute pain warns a person that some type of injury or stress has occurred that needs immediate attention. Musculoskeletal disorders, a condition that affects the bones, muscles, ligaments, tendons and nerves, are one of the most frequents types of pain and accounts for 14% of all years lost to disability world-wide [1]. Known triggers of musculoskeletal pain include obesity and a sedentary lifestyle, trauma and injury, overuse, aging, inflammation, and mental health disorders, but underlying causes often remain unclear and complex to elucidate. Musculoskeletal pain, especially when it is recurrent, may influence quality of life and can be responsible for impairing autonomy and decreasing independence, and functional capacity. The current research in pain reveals that our bodies have Self-Healing capacity and as modern medicines have helped to alleviate pain conditions, less attention has been given to leveraging and enhancing the Self-Healing powers of our body.

Conventional treatments of musculoskeletal pain include rehabilitation, non-steroidal anti-inflammatory drugs and, sometimes, opioids or surgery. McSwan et al. [2] have recently reviewed the scientific evidence supporting Self-Healing^a as a concept for the management of musculoskeletal pain, the underlying mechanisms and how this can be supported in an integrative approach for pain management. There are five known body systems as indicated in **Figure 1** which are part of the Self-Healing process working in a balanced way and in harmony with the ultimate goal to help relieve pain induced by various triggers. A systematic review of 49 surveys

Fig. 1. Self-Healing concept: biological systems and mode of action. Reproduced with permission from [2].

conducted in 15 countries found evidence of substantial application of complementary and alternative approaches, particularly in the adult general population [3]. Reflecting this reality, complementary and alternative medicine (CAM)^b have increasingly been adopted in applicable guidelines including physical therapy/massage, exercise, thermotherapy, ultrasound, acupuncture, medical devices and yoga [2].

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Psychology

Nutrition

Psychological aspects

Natural Microcirculation wasodilation

Devices Muscular relaxation/ contraction Exercise

Optimize: Multi-model therapies

^{*}Self-healing is the innate ability of the body and mind to promote mechanisms to return to equilibrium, in order to help relieve pain

^bComplementary and alternative medicine which is the term for medical products and practices that are not part of standard medical care, such as acupuncture, exercise, natural remedies, and medical devices

Integrative medicine^c may reduce the reliance on conventional analgesics, thereby reducing the risk for side effects [2]. Concomitantly, psychosocial factors can help to maintain both psychosocial and spiritual health, e.g., through techniques such as mindfulness, and activities such as yoga or physical exercise can help mental health and reduce depression, which in turn can lead to reduced pain. This concept has been supported by clinical studies, where, for example, qualitative interviews showed a perceived pain relief and enhancement of well-being when complementary and integrative approaches were applied in a long-term care facility [4].

In conclusion, incorporation of complementary and integrative approaches supporting the Self-Healing ability of the body may reduce musculoskeletal burden and at the same time overcome the risk of side effects associated with conventional pharmacological therapies.

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^cIntegrative medicine is focusing on the whole person and making use of all appropriate therapeutic approaches including CAM to promote optimal health and healing.