



Non-pharmacological Treatment of MSK Disease

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There are a number of non-pharmacological interventions which can be used in patients who have musculoskeletal disease, especially those with chronic diseases such as joint arthritis.

Education

This can reduce pain and disability, and reduce the healthcare costs of many MSK conditions, including OA and RA. Education of patients and their families can be provided in numerous ways, including one-to-one discussion, written literature, group classes etc. the mechanism of benefit is unknown but probably includes improved adherence to the management plan.

Exercise

MSK tissues require regular movement for their health. Two types of exercise commonly require prescription:

Aerobic Fitness Training

Can produce long-term reduction in MSK pain and disability. Improves well-being, encourages restorative sleep and benefits common comorbidity such as obesity, diabetes, CHD etc.

Local Strengthening Exercise

For muscles that act over compromised joints also reduces pain and disability, with accompanying improvements in the reduced muscle strength, proprioception, coordination and balance that associate with chronic arthritis. Small amounts often are better than protracted amounts performed infrequently.

Reduction of adverse mechanical factors

Reduction of excessive impact loading and adverse repetitive usage of a compromised joint or periarticular lesion is beneficial:

- a) Reduction in contact sports
- b) Simple 'pacing' of activities
- c) Use of shock absorbing footwear can reduce impact-loading through the feet, knees, hips and back, and improve symptoms at these sites.
- d) Walking stick held on the contralateral side takes weight off a painful hip, knee or foot.

Advice on weight loss if Obese – obesity puts extra strain through the joints and can accelerate the arthritic process.

Physical Treatments

- a) Local heat, ice packs, wax baths and other local external applications can induce muscle relaxation and temporary relief of symptoms.
- b) Hydrotherapy allows muscle relaxation in a warm. Pain-relieving environment without the constraints of gravity and normal load-bearing.
- c) Splints can give temporary rest and support for painful joints and periarticular tissues, and prevent disadvantageous involuntary postures during sleep. Prolonged rest, however must be avoided.
- d) Orthoses are more permanent appliances used to reduce instability and excessive abnormal movement.
- e) Simple aids may transform the lives of disabled patients, permitting dignity and independence in the activities of daily living

Coping Strategies

These are approaches that help patients to cope better with, and adjust to, their chronic pain and disability. They may be useful at any stage but should be considered particularly for patients with incurable problems who have received all other available treatment. The aim is to increase self-management through self-assessment, information and problem-solving. This involves patients recognising negative but potentially remediable aspects of their psyche (stress, frustration, anger, low self-esteem or prestige) and their situation (e.g. physical, social, financial). These may then be addressed by changes in attitude and behaviour. For example:

- a) learning yoga and relaxation techniques to reduce stress
- b) avoiding negative situations or activities that regularly produce stress, and increasing pleasant activities that give satisfaction
- c) altering beliefs about and perspectives on disease through information and discussion
- d) learning to reduce or avoid catastrophising and maladaptive pain behaviour
- e) learning imagery and distraction techniques for pain
- f) expanding social contact and better utilising social services.