The McKenzie Protocol and the Demands of Rehabilitation

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"Rehabilitation" is the physical medicine buzzword of the 90s. To some, its meaning equates to therapy in general, any kind of therapy. Used in this manner, the term "rehabilitation" loses its intended meaning as active unassisted techniques and applies even to such passive modalities as hot packs and ultrasound. "Rehabilitation" is not *any* means to functional ends, but *signifies functional* means to functional ends.

A Guide to Rehabilitation[1] defines the word "rehabilitation" as:

... "the process of improving or reestablishing an individual's skill or level of adjustment by increasing the ability to maintain a maximum level of independent functioning such as self-care and employment."

The key terms defining rehabilitation are:

1. individual's skill
2. ability
3. independent functioning
4. self care

These terms emphasize the actions of the patient as paramount in the rehabilitation program. Guidance is provided by the practitioner, but the burden of treatment involves what the patient *does,* and not what *is done* to the patient.

Functional restoration[2], work conditioning[3], and work hardening' programs use this strict definition of rehabilitation. The approach in these programs stresses the physical and psychological advantages of rehabilitation defined as activity, especially in chronic musculoskeletal injuries, when individuals have dropped out of the work force.

The physical advantages of these programs involve reactivating the individual who may have become fearful of movement and consequently deconditioned[5]. The psychological advantage is to reverse or prevent abnormal illness behavior[6], helping the patient identify with societal and worker roles rather than the role of a patient as "a passive receptacle of care."[7]

As stated, functional restoration, work conditioning, and work hardening programs are utilized on chronic cases. Often patients are referred to such programs after passive modalities, medication, or no therapy at all (the tincture of time) fail to resolve the chronic condition. In these cases, passive care may not only have not helped the individual, but may have actually "encouraged musculoskeletal morbidity."[5]

Often, patients presenting to rehabilitation centers with acute conditions, receive passive therapies initially.' This continues until the demands of an activity program (e.g., progressive weight resistance) can be tolerated without harm. The disadvantage of such initial passive care is that it is not consistent with the physical and psychological goals of rehabilitation, and passive therapy, once introduced, may "spoil" the patient's chances of progressing to unassisted, active functional activities as therapy.' Passive therapy delays the effect provided by movement to model new tissue along the lines of stress"' and increases the possibility of the development of abnormal illness behavior." Allan and Waddell[12], in fact, argue that much low back disability is iatrogenic due to the medical prescription of rest for simple backache due to misconceptions of inflammation and other related pathologies as causative factors.

A rehabilitation approach in the acute phase is needed that will provide the physical and psychological benefits of the functional restoration and work conditioning/ hardening approach for chronics, thereby preventing the need to resolve chronic conditions by not letting them develop in the first place. The McKenzie protocol[13,14] satisfies these requirements. It provides self-treatment activity techniques tolerable during the acute phase providing the physical and psychological benefits of more expensive and lengthier rehabilitation programs. It may even prevent the need for such subsequent rehabilitation programs, as it employs many of the same physical and psychological principles.

If functional restoration or work conditioning/hardening programs are subsequently needed, the initial utilization of the McKenzie protocol is likely to enhance the possibilities of their success, as these programs would be a conceptually consistent continuum from the initial acute care. Through its physical effect, the McKenzie approach addresses the mechanical nature of the patient's disorder. Through its teaching of mechanical principles of self-treatment, it is consistent with the principles of rehabilitation that prevent the development of abnormal illness behavior.

The McKenzie protocol is based on evaluating the relationship of the behavior of the patient's pain to movement and positioning. Therapeutic movements are prescribed to the patient based on examination findings concerning the effect that singular and repetitive movements have on the quality, distribution, and persistence of pain. In a sense, the "behavior" of the joint complex is assessed as to what movements are to its benefit or disadvantage, and the patient is so instructed. The patient is taught that therapeutic movement may be accompanied by increased pain with improved function, and that certain pains are not to be avoided. Rapid resolution of joint dysfunction is then possible with the eventual introduction of all possible movements for the joint complex as examination findings permit.

Congruent with the strictest rehabilitation principles is this "hands off" first approach. If results are limited, the application of therapist's "hands on" technique is applied, and treatment is returned to the

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control of the patient as soon as possible. Regarding the mechanical and physiological principles of rehabilitation, the McKenzie approach makes activity and self-treatment possible during the acute phase, providing continuous passive spinal motion strategically performed by the patient. These movements demand enhancement of new tissue organization along the lines of stress, with the formation of flexible scar tissue[10]. The tasks are introduced on a demand graded basis. This should not subtract from considering it the logical first step for the treatment of chronics, as well, for the reasons given above. If strength training is not needed for treatment of the chronic patient, the McKenzie protocol represents a relatively quick and inexpensive alternative. If activity as treatment is dispensed during the acute phase, fear of pain and the signs of pain avoidance or illness behaviors are not encouraged`, and the protracted treatment intervention for chronics is avoided.

The McKenzie protocol serves as an excellent intervention to prevent physical and psychological complications of injuries. Ogden-Niemeyer and Jacobs[13] list "some elements of effective intervention for abnormal illness behavior compiled from a number of sources." Below are selections from this list of effective interventions for abnormal illness behavior that are also effective interventions for physical complications and apply to the benefits of the McKenzie protocol. for the acute as well as the chronic patient.

1. "Early activation with selected structured activities, including, ADL, that are appropriate to the individual's level of functioning." [9, 11, 16]
2. "Emphasis on the individual taking an active role in rehabilitation and sharing responsibility with practitioners." [9, 16, 17]
3. "Emphasis on improvement in physical function/productivity, through graded mastery, and reduction in disability, rather than solely symptomatic relief or simply reducing illness behavior. " [11, 16, 17]
4. "Strict reinforcement of safety practices and appropriate worker behavior." [15]
5. "Improvement of cognitive/behavioral skills including ... activity control of symptoms" and not vice versa." [16, 17]
6. "Minimal time away from work place." [9, 11]
7. "Education ... about prevention and management of work injury and chronic pain and its management." [9, 16]
8. "Analgesics and passive modalities used sparingly it at all." [9]

Finally, to quote McKenzie himself, "By reducing the use of therapist's technique in the initial stages of treatment and maximizing patient technique, the patient will recognize that his recovery is largely the result of his own efforts. Few patients fail to assume responsibility for active participation in their treatment, providing the instruction and education process is firmly and vigorously pursued.

"Thus, we can Choose to apply to common mechanical spinal problems either therapist generated force or patient generated force. The ,host widely used and popular mechanical therapy techniques are those in which the therapist applies external forces to the patient, that *is,* therapist generated forces.

The second group of procedures is patient generated. Although less widely used, they are in nay view the more important, for they have the potential to provide the patient with that elusive long term benefit.[18]

"If there is the slightest chance that a patient can be educated in a method of treatment that enables him to reduce his own pain and disability using his own understanding and resources, he should receive that education. Every patient is entitled to this information, and every therapist should be obliged to provide it.[19]

References

I . Deutsch, P., Sawyer, *H., Guide to Rehabilitation.* Matthew Bender & Company. 7b-39-40, Suppl & Rev 1989.

2. Mayer I, Gatchel *R: Functional Restoralion IM Spinal Disorders: The Sports Medicine Approach to Low Back Pain,* Philadelphia, I ,ca & Febiger, 1988.

3. Isernhagcn Susan: Work Hardening or Work Conditioning - What's in a Name, *Industrial Rehabilitation Quarterly:* Summer/Fall 1989, Il(2): 7-9.

4. Matheson. I N, Kemp, BJ.: Work Hardening: Occupational Therapy in Industrial Rehabilitation, T*he American Journal of Occupational Therapy;* May 1985: 39(5): 314 - 321

5. Troup, J: The perception of musculoskeletal pain and incapacity for work: Prevention and early treatment. *Physiothrapy* 1988: 74(9), 435.

6. Pilowsky. 1: Abnormal Illness Behaviour, *Psychiatric Med* 1987:5(2):85-91.

7. Saal, J: Inter retched Disk Herniation in Nonoperative Treatment. Physical *Medicine and Rehabilitation: State of the Art Reviews 1990;* 4(2), *Philadelphia,* PA, Hanley & Bellfus, Inc.

8. Mitchell, RI, Carmen, GM: Intensive Active Exercise Program. *Spine* 1990: 15(6), 514.

9. Dereberry, VJ, Tullis, WH: Delayed recovery in the patient with a work compensatable injury. *Journal of Occupational Medicine* 1983, 25(1). 829-835.

10. Evans, P: The Healing Process at Cellular LeveI. Physiotherapy 1980, 66(8).

I I . Waddell, G: A New Clinical Model for the Treatment of Low -Back Pain. *Spine* 1987: 12(7): 632-639.

12. Allan, DB & Waddell, G.: An Historical perspective on low back pain and disability. Acta *Orthopaedics Scandinavica,* Suppl 234, Vol 60, 1989, Copenhagen.

13.McKenzie, RA: *The Lumbar Spine: Mechanical Diagnosis and Therapy.* Waikanae, New Zealand, Spinal Publications, 1981.

14. McKenzie, RA: *The Cervical and Thoracic Spine. Mechanical Diagnosis and Therapy,* Spinal Publications, Waikanae, New Zealand, 1990.

15. Ogden-Niemever L. Jacobs K, eds: *Work Hardening: State of the Art,* Thorofare. NJ, Slack Inc.. 1989.

16. Mayer. TG, et al: A Prospective Short-term Study of Chronic Low Back Pain Patients Utilizing Novel Objective Functional Measurement. *Pain* 1986:25:53-68.

17. Matheson, LN (Isernhagen, SJ ed): Symptom Magnification Syndrome. Work *Injury: Management and Prevention. New* York, NY. Aspen Publisher, 1988.

18. McKenzie, RA: *Cervical and Thoracic Spine; Mechanical Mechanical Diagnosis and Therapy,* Waikanae, New Zealand, Spinal Publications, 1990, p. 103.

19. Op cit p. 113.