



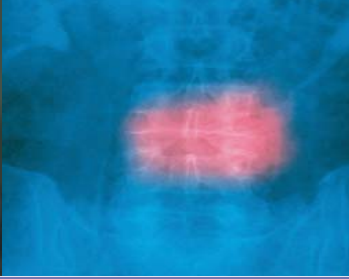
ProRehab

EVIDENCE BASED UPDATE

**AN EVIDENCE-BASED NEWSLETTER RELATED TO THE
MANAGEMENT OF MUSCULOSKELETAL DISORDERS**



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TREATMENT BASED CLASSIFICATION

In our previous EBP newsletter we discussed the recent evidence suggesting patients with low back pain do not spontaneously recover. Typically, low back pain studies divide subjects by duration of symptoms, which was considered adequate methodology to create homogenous groups to study. We now know that simply grouping patients with low back pain by duration of symptoms, in reality, creates a heterogeneous group which will not favorably respond to the same intervention. When a new intervention was tested the results were often disappointing. The new intervention showed only slightly better results when compared to the control because not all the patients with low back pain in the study needed the same intervention.¹ This methodological flaw has helped to perpetuate the notion that no intervention is superior to the passage of time and has heightened the awareness of researchers to the importance of classification. Classifying subjects with low back pain into pertinent sub-groups has been a priority for both primary care physicians and physical therapy researchers of late.

An emerging classification system with a growing body of evidence supporting its effectiveness is the Treatment-Based Classification System (TBC) originally described by Delitto et al.² This system groups patients with low back pain into one of four categories named for the primary treatment that the patients will receive. The categories have been developed over the course of several studies; the initial system included seven categories which have now been collapsed into four.

The four TBC categories are:

DIRECTION SPECIFIC EXERCISE (patients with radicular symptoms which centralize with repeated lumbar extension or flexion (McKenzie and Williams flexion type exercises)

MANIPULATION/MOBILIZATION (patients who will respond well to manipulation or those with a sacroiliac joint dysfunction who need SI mobilization)

STABILIZATION EXERCISE (patients with mainly trunk muscle weakness)

TRACTION (patients who have radicular symptoms that do not centralize with either extension for flexion exercise)





Essentially when the TBC system is utilized it allows us to match patients to time- tested, classic interventions such as repeated extension and flexion exercises or manipulation. But not all subjects need manipulation and not all subjects need extension exercises, so by matching the intervention to the patient we are able to reduce practice variability as well as eliminate the over utilization of some traditional interventions (such as modality based programs) that may not be effective.³

Utilizing this system, the physical therapist evaluates a patient with low back pain and looks for key historic factors, clinical signs and symptoms, and response to repeated movements which have been shown to discriminate between classification groups.⁴ The patient is placed into one of the four groups allowing for the most appropriate intervention to begin immediately. Research supporting the use of the **TBC system has emerged over the last few years including a randomized controlled trial (RCT) demonstrating subjects' disability and pain was reduced sooner with benefits maintained at one year when they received intervention based on the TBC system.**⁵ **The control group received care consistent with medical practice guidelines.** Other research has shown that when subjects are matched to the correct directional preference exercise (flexion or extension) outcomes are superior as compared to subjects who were not

matched to their preferred exercise direction.⁶ Two studies have identified specific clinical factors which discriminate between those subjects which will or will not favorably respond to spinal manipulation^{7,8} (physical therapy utilization of spinal manipulation will be the topic of our next EBP newsletter). Additionally, a RCT published in *Spine* this year, demonstrated that patients whose treatments matched their classification experienced greater reduction in disability and pain in the short and long term than those who were not matched.⁹

In addition to the physical treatments that patients with low back pain receive, there are also two points from the literature that we must consider; patient education and early access to physical therapy. Patient education has been shown to be an important factor in the overall treatment process. We utilize evidence-based educational materials which emphasize the importance of avoiding bed rest, maintaining as normal of an activity level as possible and positive coping mechanisms. **Early access to physical therapy has been shown to be superior to withholding care for the traditional 4-6 week period^{10,11}** in separate large RCT's published within the last two years.

Our next newsletter will continue with the theme of classification of patients with low back pain and discuss how to identify patients who will respond favorably to spinal manipulation.



KYLE KIESEL, PT, ATC, CSCS

Kyle@prorehab-pc.com
Office 812.476.0409
Cell 812.589.5826

UPCOMING EBP NEWSLETTERS:

September - Physical Therapy Use of Spinal Manipulation

October - Advances in Therapeutic Exercise for Low Back Pain

November - Summary of topics to date...how we incorporate our findings into patient care

CONGRATULATIONS TO...



Del Nance, PTA, ATC, CSCS, NASM-PES

Del has been named the new Certified Athletic Trainer for Castle High School in Newburgh, IN. He will provide athletic training coverage for the student athletes at Castle and will provide outpatient services to ProRehab patients at our location in Newburgh on Wyntree Drive.

Del received his Bachelor of Science in Physical Education from Illinois State University and his Associate Degree in the Physical Therapy Assistant program at Illinois Central College. In August 1998, he received his Athletic Training Certification from the NATABOC. Del is a NSCA Certified Strength & Conditioning Specialist as well as Performance Enhancement Specialist.

The athletes and coaching staff at Castle and the patients at ProRehab in Newburgh are in very good hands. Congratulations Del!

LIST OF REFERENCES

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7300 E. INDIANA ST., STE. 102
EVANSVILLE, IN 47715

