

James Selfe Protocol October 2000

Treatment For Patellofemoral Pain Syndrome

Professor James Selfe explains the potential causes, diagnoses and protocols for patellofemoral pain (PFP). He illustrates how using **electromyographic (EMG) biofeedback** with knee exercises and treatment can assist in the successful rehabilitation of the vastus medialis muscle in patients with PFP.

Results

EMG Biofeedback provides instant feedback as to whether the exercise was performed correctly. This is particularly useful in the early stages of rehabilitation when the exercises are not particularly easy to perform and accurate performance is vital. Evidence suggests that **biofeedback** is an extremely effective tool, at least in the short term, to use as an adjunct to the rehabilitation of patellofemoral problems.

Methods

In the musculoskeletal field, **biofeedback** from the **NeuroTrac 5** device, the legacy predecessor of the **NeuroTrac MyoPlus2 Pro** (Verity Medical), uses the **EMG** signal for the electrical activity associated with a contracting muscle. Biofeedback enables the therapist to determine whether the contraction is being sustained over the chosen time period. This is very useful in patellofemoral problems, as these patients will often display a specific eccentric deficit. Identifying when and where this deficit occurs enables the therapist to use very specific rehabilitation techniques.

By selecting the work/rest assessment mode on the **NeuroTrac 5** software the clinician can accurately review the patient's progress, allowing the therapist to evaluate the patient's progress over a number of training sessions and to decide whether further training is likely to produce worthwhile gains in function. It is also helpful to the patient to know what progress he/she has made relative to other training sessions as well as receiving feedback during the session.

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