BIOFEEDBACK

PTA 236 Presentation

By: Greg Heim
Biofeedback

• Biofeedback is a treatment technique in which people are trained to improve their health by using signals from their own bodies.
• Physical Therapists use biofeedback to help stroke victims regain movement in paralyzed muscles.
• Psychologists use it to help tense and anxious patients learn to relax.
Using Biofeedback

• Have you ever taken your own temperature or stepped on a scale? Both devices “feed back” information about your body’s condition.

• When you raise your hand to say hello to a friend, or flex your knee to take a step on a treadmill, you control these voluntary functions.

• Other body functions such as heart rate, skin temperature, and blood pressure are involuntary functions controlled by the autonomic nervous system.
History of Biofeedback

• The term “biofeedback” was coined in the late 1960’s

• Described laboratory procedures being used to train experimental research subjects to alter brain activity, blood pressure, heart rate, and other bodily functions that normally are not controlled voluntarily.

• Today researchers see biofeedback as a training tool more so than a treatment technique.
Biofeedback in Physical Therapy

*Training not Treatment*

• The goal of using biofeedback on a patient is to improve muscle strength or function by monitoring their progress.

• Visual and audio cues alert the patient when progress is made.

• When a patient sees a flash of a light or hears an audible cue from the monitor, they make internal adjustments to improve their functionality.
Emphasis on Education

• While placing sensors on the patient’s skin, the therapist explains what each sensor will be measuring.

• The therapist assures the patient that the sensors do not cause pain or shock, but are simply recording signals from the body and displaying them on the monitor.

• The therapist chooses signals which take into account both the needs and limitations of the individual being seen, and then explains each signal.
Clinical Applications of Biofeedback

- Migraine headaches, tension headaches and other chronic pain disorders
- Hypertension/Hypotension
- Cardiac arrhythmias
- Raynud’s disease
- A.D.H.D.
Open Discussion

• John Stuggert DPT NOVA CARE
• Technological Advances
• A.D.H.D
• Biofeedback/ Electric-Stimulation
Summary

• Biofeedback is a tool to improve patient care.
• The adaptation of innovative technology available today and in the future will make biofeedback more cost effective and efficient.
• Biofeedback is poised to become a standard of Physical Therapy intervention.
References

• Biofeedback in medicine: who, when, why and how? *Mental Health in Family Medicine* 2010; 7:85-91


• http://psychotherapy.com/