The B-FIT Model for Huntington’s Disease

American Physical Therapy Association
Combined Sections Meeting
Anaheim, California

Thursday, February 18, 2016
8:00-10:00 am

PRESENTERS

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LEARNING OBJECTIVES

Upon completion of this course, you will be able to:
1. Describe the pathology and medical management of Huntington’s disease (HD).
2. Integrate findings from current literature as it pertains to HD rehabilitation and physical therapy evaluation and intervention
3. Apply the principles of the B-FIT model for HD rehabilitation to a physical therapy plan of care to promote exercise intensity and individualized programs.
4. Understand how to use community resources to start a HD fitness group in your local area.

SESSION OUTLINE
Pathology and Medical Management of Huntington’s Disease (HD)
Review of the Literature in HD rehabilitation and physical therapy
B-FIT Model of HD Rehabilitation
Beginning an HD Program in Your Community
Question and Answer Session
Pathology and Medical Management of Huntington’s Disease (HD)

Pathology and medical management of HD
- History of HD
- Epidemiology
  a. US 2-10/100,000
  b. Mean onset 40 years of age
  c. Mean duration 15 years
- Genetics
- Neuropathology
- Clinical presentation
  a. Most frequent signs/symptoms: Chorea, unstable gait, unsteadiness, irritability, depression, clumsiness, speech difficulties, memory loss, dropping things, lack of motivation, paranoia, intellectual decline, sleep disturbance, hallucinations, weight loss
  b. Westphal variant
- Natural History: Progression of motor dysfunction, dementia, dysphagia, and incontinence results in death from aspiration, infection, and poor nutrition
- Medical Management
  a. Chorea – tetrabenazine, neuroleptics
  b. Psychiatric complaints – anti-depressants, anti-psychotics
  c. Dementia – no clear benefit from dementia medications

A Review of the Literature in Huntington’s Disease Rehabilitation and Physical Therapy Interventions and Outcomes

Topics will include:
- The evolution of rehabilitation and physical therapy literature specific to HD
- Impairments, activity limitations, and participation restrictions that physical therapists can address
- The most recent evidence for physical therapy intervention in HD, such as task-specific training, motor learning, dual-task training, cardiovascular training, exercise, and a multidisciplinary approach
- HD outcome measure recommendations
The B-FIT Model of Huntington’s Disease Rehabilitation

Key aspects of therapy model (Figure 1)
***Understand HD and how to build plan of care in any therapy setting using:
1. Balance
2. Functional training
3. Intensity
4. Trunk stability

Why this model?
- HD is a progressive disease this model proposes to follow patients over time. In other words see these patients back to clinic, in the home or in sub-acute settings over their lifetime.
- Track outcomes for improved understanding for therapy plan and also for education of patients and caregivers.
- Individualized program for each patient with HD
- Intensity Matters!
- Assist with plan on continued exercise and what will promote success to maintain exercise gains.
- To set up program contact your local Huntington’s disease chapter at hdsa.org: this will allow you to connect with the needs of your community.

Norton Healthcare/Bellarmine University Community Fitness Program
- 1x/week during May-August: facilitated by physical therapist and 1 volunteer. Time: 5pm -6 pm
- 2x/week during August-April: facilitated by physical therapist and 2 Bellarmine University DPT students. Time: 1130am -1230 pm
- Part of service learning curriculum at Bellarmine University
- Location: Norton Healthcare: hospital based outpatient clinic allows group to use space
- Number of participants: 5-15
- 1x/month: music therapist comes to utilize music to enhance movement patterns and relaxation
- 1x/month: chair/standing yoga class
- Other days: it is circuit training made up of: balance exercises, trunk stability exercises and functional movement patterns.
  - 1 min 2 sets of each exercise (this varies based on group members)
- Connect with movement disorder fellowship trained neurologist to enhance interdisciplinary care between healthcare professionals.
- If you are interested in starting a group near you: feel free to contact Liz Ulanowski at eulanowski@bellarmine.edu for additional information
Figure 1

- Increase heart rate to submaximal levels
- Increase cardiovascular endurance
- Frequent bouts of treatment
- Beyond patient self-perceived comfort of training

- Bed mobility
- Transfers
- Sit to stands
- Gait
- Overall awareness of functional task performance
- Dual tasking
- Awareness

- Balance postures
  (single leg stance, tandem stance, semi-tandem)
- Alternate surfaces
- Multi-directional movements
- Dual tasking
- Vestibular and visual training

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- Gait
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- Dual tasking
- Awareness

- Posture strengthening
- Strengthening core
- Postural reactions
- Awareness of body in space

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REFERENCES


