האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

The Hebrew University of Jerusalem

Syllabus

Pain-Mechanisms assessment and methods of inter - 99870

Last update 01-10-2013

HU Credits: *2*

Degree/Cycle: *2nd degree (Master)*

Responsible Department: *Occupational Therapy*

Academic year: *1*

Semester: *2nd Semester*

Teaching Languages: *Hebrew*

Campus:

Course/Module Coordinator: *Dr. Tami Bar-Shalita*

Coordinator Email: *barshalitat@mscc.huji.ac.il*

Coordinator Office Hours:

Teaching Staff:
Tami Bar-Shalita
Prof Shula Parush
Shira Kraus

Jean Jacques Vatine

Course/Module description:
This course is offered over 4 days. Half the course covers the neurophysiology of pain including the peripheral nervous system, central nervous system and anatomy. The second half covers the intervention for individuals with pain with a focus on occupational therapy treatment and assessment.

Course/Module aims:
• To teach the pain system and its impact on rehabilitation
• To teach intervention perspectives of pain and their contribution to rehabilitation in occupational therapy

Learning outcomes - On successful completion of this module, students should be able to:
• analyse pain from a neurophysiological perspective
• describe the stages of pain development
• suggest possible systems of pain as a basis for the overall clinical presentation
• present rehabilitation approaches for individuals with pain
• present the unique contribution of occupational therapy in the treatment of pain

Attendance requirements(%):
100%

Teaching arrangement and method of instruction: Lectures, discussions, readings

Course/Module Content:
• Theories of pain
• From receptors to the brain – the neuroanatomy of pain
• Processing and modulation of pain
• Pain measures
• Principles of rehabilitation and their application

- *Psychological view of perceptions of pain and their impact on treatment*
- *CRPS*
- *Assessment and intervention of pain in occupational therapy*
- *Pain and sensory processing*

Required Reading:

Apkarian, A.V., Bushnell, M.C., Treede, R-D., Zubieta, J-K. (2005). Human brain mechanisms of pain perception and regulation in health and disease. European Journal of Pain,9 (4), 463-484.

Arendt-Nielsen L, Yarnitsky D. (2009). Experimental and clinical applications of quantitative sensory testing applied to skin, muscles and viscera; J Pain, 10 (6),556-72.

Beerthuizen, A., Van't-Spijker, A., Huygen, F., Klien, J., & De Wit, R. (2009). Is ther an association between psychological factors and complex regional pain syndrome type I In adults? A systematic review. Pain, 145, 52-59.

Bingel U, Tracey I. (2008). Imaging CNS modulation of pain in humans. Physiology (Bethesda),23, 371-80.

Bruehl, S.,& Chung, O.Y. (2006). Psychological and behavioral aspects of Complex regional pain syndrome management. Clinical Journal of Pain, 22 (5), 430-437.

Davis KD. (2011). Neuroimaging of pain: what does it tell us? Curr Opin Support Palliat Care, 5, (2),116-21.

De Mos, M., Huygen, F.J.P.M., Dieleman, J.P., Koopman, J.S.H.A., Stricker, B.H.Ch., & Sturkenboom, M.C.J.M. (2008). Medical history and the onset of complex regional pain syndrome (CRPS). Pain, 2008, 1-9.

D'Mello R, Dickenson AH. (2008). Spinal cord mechanisms of pain. Br J Anaesth,101, 8-16.

Gatchel, R.J., Peng, Y.B., Fuchs,P.N., Peters,L.P., & Turk, D.C. (2007). The biopsychosocial approach to chronic pain: scientific advances and future directions. The American Psychological Association, 133 (4), 581-624.

Huge V, Lauchart M, Förderreuther S, Kaufhold W, Valet M, Azad SC, Beyer A, Magerl W. (2008). Interaction of hyperalgesia and sensory loss in complex regional pain syndrome type I (CRPS I). PLoS ONE ,3: e2742. doi:10.1371 http://www.plosone.org/home.action

Maihöfner, C., Handwerker, H.O., Neundorfer, B., & Birklein, F. (2003). Patterns of cortical reorganization in complex regional pain syndrome. Neurology, 61, 1707-1715.

Maihöfner, C., Handwerker, H.O., Neundorfer, B., & Birklein, F.(2004). Cortical reorganization during recovery from comlex regional pain syndrome. Neurology,

63, 693-701.
Maihöfner, C., Seifert, F., & Markovic, K. (2010) Complex regional pain syndrome: new
pathophysiological concepts and theories. European Journal of Neurolog,17, 649-660.
McMahon Stephen & Koltzenburg Martin. (2005). Wall and Melzack's Textbook of Pain, 5th Edition. Churchill Livingstone.
Merskey,H., & Bogduk,N. (1994). Classification of chronic pain descriptions, of chronic pain syndromes and definitions of pain terms, 2nd edition: International Assocoation for the Study of Pain.
Mesulam, M.M. (1998). From sensation to cognition. Brain, 121, 1013-1052.
Price, D.D. (2002). Central neural mechanisms that interrelate sensory and affective
dimentions of pain. Molecular Intervention, 2 (6), 392-400.
Reedijk, W.B, Van Rijn, M.A., Roelofs, K., Tuijl, J.P., Marinus, J., & Van Hilten,
J.J.(2008). Psychological features of patients with complex regional pain syndrome type
I related dystonia. Movement Disorder Society, 23 (11), 1551-1559.
Shipton, E.A.(2009). Complex regional pain syndrome- Mechanisms, diagnosis and
management. Current Anaesthesia and Critical Care, 20, 209-214.
van Wijk G, Veldhuijzen DS. (2010). Perspective on diffuse noxious inhibitory controls as a model of endogenous pain modulation in clinical pain syndromes. J Pain,11 (5),408-19.
Verne, G.N., Robinson, M.E. & Price, D.D.(2004). Representations of pain in the brain.
Current rheumatology reports,6 (4), 261-265.

Additional Reading Material:

Course/Module evaluation:
End of year written/oral examination 0 %
Presentation 0 %
Participation in Tutorials 0 %
Project work 100 %
Assignments 0 %
Reports 0 %
Research project 0 %
Quizzes 0 %
Other 0 %

Additional information:

Pass mark is 70%