**Making sense of evidence from trials and systematic reviews in physical therapy**

**Dr Neil O’Connell**

**Course description**

This 2 day course is designed for current clinicians and aims to enable participants to become better users of clinical effectiveness research. The course will explain and cut-through the jargon of trials and systematic reviews and offer a framework for critically appraising these types of research paper. The broad aim is that participants will develop the skills to go beyond the abstract of a paper and be able to make detailed and informed judgements regarding the validity and results of trials and systematic reviews and to consider what those results might mean to their practice.

**Format**

The course will consist of a mix of lectures and workshops. For the workshops, prior to the course participants will be directed to contemporary open-access trials and systematic reviews (titles TBC) to read. These will be critically discussed using a critical appraisal tool in small groups followed by large group discussion. At all times the emphasis will be on keeping it clinically relevant, fun and interactive.

**Course Objectives/ Learning outcomes**

At the end of the course participants should be able to:

* describe the various designs of clinical trials and discuss what each design offers
* describe the basic structure of a systematic review
* understand and identify the major risks of bias and threats to internal validity in RCTs and Systematic reviews
* interpret and appraise a basic meta-analysis
* interpret the meaning of a range of different commonly used effect sizes
* critically discuss the applicability of research results to everyday practice.

**Course Tutor**

Dr Neil O’Connell is a Senior Lecturer in Physiotherapy in Brunel University, London, UK. He divides his time between research and teaching and previously worked extensively as a musculoskeletal physiotherapist. He leads a module in the principles and practice of evidence based healthcare for post-graduate physiotherapists and occupational therapists. Neil’s main research interests are chronic low back pain with a focus on evidence based practice and he has published extensively in this area. He has authored and co-authored a number of published systematic reviews.

Neil is a member of the editorial board of the Cochrane Collaboration’s Pain, Palliative and Supportive Care (PaPaS) group, is the section editor for clinical trials and systematic reviews for the pain science blog Body in Mind ([www.bodyinmind.org](http://www.bodyinmind.org)) and is currently a member of the Guideline Development Group for the UK’s National Institute of Health and Care Excellence (NICE) updated guideline for the management of low back pain.

**Course Schedule**

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| **Time** | **Session** |
| **Day 1** | |
| **9:00** | * Intro, housekeeping * Lecture: Trials, reviews and EBP - Do we need them? * Q&A |
| **10:30** | Coffee |
| **10:50** | * Lecture: The basics of critically reading any paper * Q&A * Lecture: Interpreting common effect sizes + short group task * Q&A |
| **12:30** | Lunch |
| **1:30** | * Lecture: the basics of RCTS - what should I look for? * Q&A |
| **2:40** | Coffee |
| **3:00** | * Group session: Small groups apply CASP critical appraisal tool to 2 RCTs * Group discussion |
| **5pm** | Finish |
| **Day 2** | |
| **9:00** | * Lecture: Basics of systematic reviews – what should I look for? * Q&A |
| **10:15** | Coffee |
| **10:30** | * Lecture: Making sense of meta-analysis * Q&A |
| **12:00** | Lunch |
| **1pm** | * Group session: Small groups apply CASP critical appraisal tool to 2 reviews * Group discussion |
| **3pm** | Coffee |
| **3:30** | * Group effect size task * Lecture: Round up and sticky messages * Group discussion |
| **5pm** | * **Finish** |

**Bibliography (Recommended reading)**

Critical Appraisal Skills Programme (CASP-UK) “Making sense of evidence” http://www.casp-uk.net/ Accessed 2/6/14

Greenhalgh T (2010) How to Read a Paper: The Basics of evidence based medicine (4th Edition) London: Wiley-Blackwell ISBN-10: 1444334360 ISBN-13: 978-1444334364(Or 5th edition just released: <http://eu.wiley.com/WileyCDA/WileyTitle/productCd-EHEP003117.html>)

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