Welcome to Physiotherapy at Brunel

Discover Brunel

Congratulations on securing your place at Brunel

We're looking forward to meeting you - either in person or online - and introducing you to life at Brunel.

To help us get started, we've put together a short activity and some further information to help you prepare for your course - including a snapshot of the topics you'll cover and useful resources.

If you have any questions please email chmls-tpo-physio@brunel.ac.uk

Pre-arrival activity

We'd like you to complete a short activity before you join us. We can discuss your answers in one of your first personal tutor sessions. Your work will not be officially assessed however it will allow your tutor to get to know you better.

Physiotherapists work with the body – that of the clients they are working with and their own. In the process of assessment or treatment, physiotherapists will often handle the body of their clients therapeutically to palpate tissue, test ligaments, demonstrate exercises etc. The manual 'hands-on' aspect of physiotherapy is often considered a core element of intervention and much time is spent teaching students how to manage their own bodies in order to handle their clients in a safe and professional manner. But therapeutic/ manual handling is complex. It is both a physical and social phenomena and its use within physiotherapy is debated.

In your first Professional Development tutorial you will be discussing the nature of therapeutic handling in physiotherapy education and practice. In preparation for this discussion please read this article and give some thought to the following questions.

1. What issues are being raised in this article?
2. What is the difference between hands-on and hands-off physiotherapy?
3. What rationale are the different sides giving for their decision?
4. What are your thoughts about the pros and cons of therapeutic handling?

Sample coursework questions

1. Example of Rehabilitation module:
   - Identify the agonists and antagonists primarily responsible for producing a deep squat.
   - Identify how the type of muscle work occurring on both the descent and ascent phase of movement, state the range of movement at the hip and knee and the range of muscle work undertaken. Finally identify the planes and axes of movement.
2. Example of Rehabilitation and Pathophysiology modules:

   Eighty year old Mrs T with generalised osteoarthritis had a total hip replacement 10 days ago. Today her hip muscle strength has been rated as 3/5 on the Oxford Scale. Her hip range of movement has been measured via goniometry as:

   Flexion – 75° Extension – 15° Abduction – 25°

   Internal rotation and external rotation – ranges are acceptable for her age.
   - Explain how her pathology has resulted in the need for hip surgery.
   - Identify some functional difficulties Mrs T may currently be experiencing
   - Design an exercise programme to address both her strength and range deficits.
   - Identify the movement pattern associated with risk of dislocation in patients post total hip replacement surgery.
3. Example of Respiratory module:

   Mr W. is asthmatic he relies on daily medication of Becotide and Ventolin prn, via inhalers. During an asthmatic episode Mr W becomes breathless and notices it's harder to breathe.
   - Referring to the pathology explain his symptoms.
   - Referring to his medication identify how these drugs either relieve or prevent his symptoms.
4. Example of Respiratory and Rehabilitation modules:

   Because of his asthma Mr W has adopted a sedentary life. Consider whether it was necessary for him to do so and identify factors which may have guided his decision. As a consequence of his sedentary behaviour Mr W's cardio-respiratory fitness (aerobic capacity) is low and his risk of cardiometabolic disease has significantly increased as has his waist-line; he now has a BMI of 33
   - Identify the physiological changes to his skeletal muscle fibres which have occurred as a consequence of sedentarism and which have contributed to his low cardiorespiratory fitness.
   - Design an exercise programme to address Mr W's low fitness – remember to refer to the FITT principles, fitness guidelines, and to take account Mr W's BMI.
   - Identify what methods you might use and skills you might draw on to keep an habitual non-exerciser like Mr W on track.
   - Identify the chronic cardiometabolic morbidities which become less likely as Mr W gains fitness.

5. Example of Anatomy and Rehabilitation modules:
    - Identify the origins and insertions of the largest hip extensor in the human body.
    - Identify the direction of fibres and relationship to other anatomical structures.
    - Identify the blood and nerve supply to this muscle giving nerve root values, and suggest functional activities in which this muscle acts as a prime mover.
    - Repeat this process for gluteus medius and minimus identifying any differences in function.

Reading list

- **Anatomy**
  Palastanga, N. and Soames, R. (2018). Anatomy and Human Movement. Structure and Function (7th edition). Churchill Livingstone Elsevier
- **Rehabilitation**
  Heywood, V and Gibson, A. (2108). Advanced Fitness Assessment And Exercise Prescription 8th Edition. Human Kinetics
- Marieb, E and Hoehn, K. (2018) Human Anatomy and Physiology. Pearson International 10th edition
- American College of Sports Medicine (2017),ACSM's Guidelines for Exercise Testing and Prescription. 10th edition .Philadelphia, Lippincott, Williams & Wilkins Bandy.W, Sanders.B
- **Respiratory**
  Main E and Denehy L (Editors) (2016) Cardiorespiratory Physiotherapy Adults and Paediatrics (5th edition) Elsevier
- **Pathophysiology**
  VanMeter, K and Hubert, RJ (2018) Gould's Pathophysiology for the Health Professions 6th edition. Saunders.
- Free Physiotherapy e-books

We look forward to meeting you in Welcome Week (Monday 21 – Friday 25 September).

Physiotherapy Team

Find out more about Welcome Week
brunel.ac.uk/welcome-week

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