

## What is Physiotherapy?

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**Warm-up:** Discuss the following questions.

1. Why did you decide to become a physiotherapist?
2. What is physiotherapy?
3. What type of education does a physiotherapist have?
4. What types of problem can physiotherapy help?
5. What does the treatment involve?

Physiotherapy, or Physical Therapy, is a healthcare profession concerned with the assessment, maintenance, and restoration of the physical function and performance of the body. It is a distinct form of care which can be performed either in isolation or in conjunction with other types of medical management. Used in conjunction with certain medical or surgical techniques, physiotherapy can complement these techniques to help provide a speedy and complication-free return to normal activity.

Physiotherapy can be useful in the diagnosis and management of a wide range of injuries, disease processes, and other conditions, including: postural problems, arthritis, occupational injuries, rehabilitation following cardiac surgery, developmental and paediatric problems, geriatric problems, incontinence, specific children's conditions...

**Exercise 1:** Physiotherapy also helps in treating the following injuries and diseases. Match the words (1-5 with A-E and 6-10 with F-J).

- |                    |                   |                   |                   |
|--------------------|-------------------|-------------------|-------------------|
| 1. sports          | A. mobility       | 6. stroke         | F. conditions     |
| 2. amputee         | B. disease        | 7. spinal cord    | G. health         |
| 3. asthma          | C. rehabilitation | 8. neurological   | H. pain           |
| 4. impaired        | D. management     | 9. women's        | I. rehabilitation |
| 5. chronic airways | E. injuries       | 10. back and neck | J. injuries       |

**Exercise 2:** Read the text. Complete the headings for each paragraph. Choose the headings from the following list.

- a. *providing rehabilitation following occupational or sporting injuries*
- b. *providing advice on exercise programs*
- c. *identifying the causes and predisposing factors*
- d. *providing or advising on special equipment*
- e. *identifying the problem area and treating this directly*
- f. *providing rehabilitation and exercise before and after surgery*

### How can physiotherapy help me?

Physiotherapy can help individuals by:

1. \_\_\_\_\_.

Physiotherapists treat a wide variety of injuries and problems using many different techniques. In many cases, the causes of pain and dysfunction are obvious, but sometimes things are not so black and white, especially when symptoms are inconsistent or difficult to describe. Physiotherapists can perform a wide range of tests to help locate the source of the problem and implement the appropriate treatment strategy.

2. \_\_\_\_\_.

Physiotherapists are not only interested in the problem, but factors which contribute to the problem. Identifying factors such as poor posture, improper techniques, muscle imbalances, poor work practices, or other bad habits allow interventions to be made to correct these factors. This will reduce the risk of the same thing happening again in the future.

3. \_\_\_\_\_.

Physiotherapists can help you get back to work or sport more quickly by providing rehabilitation programs and advice on how to prevent a recurrence of the injury.

4. \_\_\_\_\_.

If you are having or have had major surgery, physiotherapists are often involved in pre-operative and/or post-operative programs to help get you moving again, making sure your length of stay in hospital is not unexpectedly extended.

5. \_\_\_\_\_.

If you have the urge to get fit and stay healthy, one of the best ways to do this is through regular exercise. However if you have not done any serious exercise for a while, it may be advisable to seek assistance to devise an appropriate program for your needs, and ensure you are not at risk of injury.

6. \_\_\_\_\_.

With different conditions or disease processes, special equipment may be required. Physiotherapists can advise on many different types of equipment, including splints, walking aids, wheelchairs, occupational equipment etc.

### What do Physiotherapists do?

A common misconception is that physiotherapists only deal with injuries to backs, necks, joints, muscles and other 'sports' type injuries. While many physios certainly do treat these types of conditions, there are other areas in which physiotherapists are trained and can help you. For simple explanation, physiotherapy can be divided into three broad areas:

Musculoskeletal physiotherapy, Cardiothoracic physiotherapy, Neurological physiotherapy

**Exercise 3:** Write the appropriate conditions below the correct type of physiotherapy.

neck pain	stroke	asthma	balance disorders	Parkinson's disease
sporting injuries		ICU patients		spinal cord injuries
emphysema	multiple sclerosis		muscle strains	joint sprains
chronic bronchitis		arthritis		following cardiac surgery

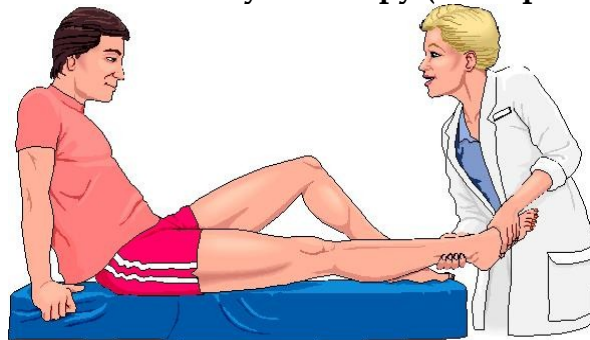
<b>Musculoskeletal physiotherapy</b>	<b>Cardiothoracic physiotherapy</b>	<b>Neurological physiotherapy</b>

**Exercise 4 - reading:** You will be divided into 3 groups. Group A will read about Musculoskeletal Physiotherapy (Orthopaedics), Group B will read about Cardiothoracic Physiotherapy and Group C will read about Neurological Physiotherapy and Where do Physiotherapists work?

Each group will answer the following questions:

1. Which systems or organs does each type of physiotherapy deal with?
2. What pathological conditions do they help to treat?
3. What are some of the techniques used in treatment?

### Musculoskeletal Physiotherapy (Orthopaedics).



As the name suggests, this area deals with muscles, bones and joints, and is perhaps the most widely known. Musculoskeletal physiotherapists can deal with many acute or chronic conditions such as:

back and neck pain or stiffness, muscle strains/contusions, joint sprains/stiffness/instability, arthritis, muscle imbalances/weakness, muscle spasm, tendonitis/bursitis, rehabilitation following occupational injury, surgery, sporting injuries.

The musculoskeletal physiotherapist uses a variety of different treatment methods to help speed up the healing process and reduce the likelihood of the same thing happening again.

Some of the techniques include:

manual techniques (massage, joint mobilisation, manipulation, stretches); electrotherapy (ultrasound, interferential, TENS, shortwave, microwave, laser); heat and cold; therapeutic exercise; correction of posture, lifting techniques, sporting techniques which contribute to the problem; taping, bandaging, splinting; hydrotherapy.

The musculoskeletal physiotherapist is not only concerned with treating the injury, but with finding the cause and correcting any biomechanical factors which may contribute to the injury.

**Exercise 5A:** Translate the expressions from the text.

1. svalová křeč
2. pohmožděniny
3. náprava držení těla
4. léčba zranění
5. chirurgický zákrok
6. ztuhlost, špatná pohyblivost
7. proces hojení
8. namožení svalu
9. ovinutí, omotání páskou
10. kloubní výrony

### Cardiothoracic Physiotherapy.

Cardiothoracic physiotherapists deal primarily with the function of the cardiorespiratory system. The cardiothoracic physiotherapist, often working in the acute hospital\*, deals with a variety of situations, some of them being:

chronic obstructive airways disease (emphysema, asthma, chronic bronchitis); following general surgery; general medical conditions; following cardiac surgery; following most types of thoracic surgery; ICU patients.

The cardiothoracic physiotherapist aims to optimise the function of the cardiothoracic system and patient comfort, resulting in increased exercise tolerance, a reduced chance of developing complications such as chest infections, reduced shortness of breath, and a reduced length of stay in hospital.

Some of the treatment techniques at the physiotherapists' disposal are:

breathing techniques either to reduce shortness of breath or increase lung expansion; patient positioning; sputum clearance with percussions, vibrations, coughing, deep breathing, suction; mobilising, sitting out of bed, or walking; oxygen therapy; mechanical ventilators; medications; exercise programs.

**Exercise 5B:** Translate the expressions from the text.

1. cvičební programy
2. kašel
3. k dispozici fyzioterapeutům
4. délka pobytu
5. operace hrudníku
6. hlavně
7. polohování pacienta
8. Jedinotka intenzivní péče
9. mající za výsledek
10. dýchavičnost

### Neurological Physiotherapy.

Neurological Physiotherapy, as the name suggests, is concerned with disorders of the nervous system. The neurological physiotherapist is involved in the assessment and treatment of patients suffering from conditions such as:

acquired brain injuries/head injuries; strokes; brain surgery; Parkinson's disease; multiple sclerosis; Guillian-Barre syndrome; balance disorders; spinal cord injuries; other neurological conditions.

The neurological physiotherapist is involved in determining how these conditions affect the patients' movement and function, and implementing strategies to regain maximum function, depending on the type of disorder.

### Where do Physiotherapists work?

Physios work in many different places and situations, including:

hospitals, private practices, medical centres, rehabilitation centres, nursing homes, sports clinics, sports clubs, gymnasiums.

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\* **Acute hospitals** are those intended for short-term medical and/or surgical treatment and care.

**Exercise 5C:** Translate the expressions from the text.

1. druh poruchy
2. mrtvice
3. sanatoria
4. poruchy rovnováhy
5. posouzení a léčba
6. znovu nabýt/získat
7. zranění míchy
8. postihovat pohyb pacientů
9. zahrnující
10. tělocvičny

**Exercise 6 - gap fill exercise:** Complete the text with the words from the box.

component	involve	graduates	applications	degree
lectures	treatment	practical	practices	required

### Studying Physiotherapy in Australia

Becoming a physiotherapist in Australia involves undertaking a four year bachelor's \_\_\_\_\_<sup>1</sup> in Physiotherapy or Applied Science (Physiotherapy) at one of the tertiary institutions offering such a program. Upon completion, \_\_\_\_\_<sup>2</sup> are usually eligible to apply for registration with the Physiotherapists Registration Board in the State in which they wish to practise.

The four years of study \_\_\_\_\_<sup>3</sup> theory, practical, and clinical components, giving students a firm knowledge of the body, injury and healing processes, and \_\_\_\_\_<sup>4</sup> techniques.

The first years of the course are predominantly theory and \_\_\_\_\_<sup>5</sup> based, while later on students undertake clinical placements in hospitals, \_\_\_\_\_<sup>6</sup>, and other settings.

Most subjects in the first years will have both a theoretical and practical \_\_\_\_\_<sup>7</sup>.

The theory will usually come in the form of \_\_\_\_\_<sup>8</sup> or tutorials, and provide much of the \_\_\_\_\_<sup>9</sup> information, while practical classes allow students to practice methods for themselves or see \_\_\_\_\_<sup>10</sup> of the theory in a real world situation.

**Exercise 7:** Complete the correct name of the subject that is studied by physiotherapists.

**Typical subjects** in the first and second years are:

1. \_\_\_\_\_ - learning about the structure of the body; the names of the bones, muscles, joints, ligaments, nerves, blood vessels and organs, and how they are related to each other in terms of position within the human body.
2. \_\_\_\_\_ - focuses on the various systems within the body which make us work; how the cardiovascular and respiratory systems supply oxygen and nutrients, how the gastrointestinal system processes food, how nerves send information to and from the brain and how muscles contract to provide movement are some of the topics covered. Some subjects may include studies in exercise physiology, which looks at how the body's systems need to react to the extra demands placed on it during exercise.
3. \_\_\_\_\_ - cells are the building blocks of life; biology looks at some of the many different types of cells which make up the different organs, their components, and how they work to provide energy and contribute to healing and growth and normal function.
4. \_\_\_\_\_ - the study of abnormal cellular activity resulting from injury or disease, students learn about inflammatory processes, repair of tissues, immunological reactions, conditions such as cancers, degenerative diseases and more.

5. \_\_\_\_\_ - some courses may teach physics to provide a foundation for some of the concepts built upon in electrotherapy or kinesiology subjects. Topics may include electricity, electromagnetics, and kinetics or motion.

6. \_\_\_\_\_ - relates to the study of movement of the body. Principles of lever systems and mechanics as related to the human skeleton are covered. Patterns of movements common in everyday life such as walking and running are studied in detail, giving students an understanding of normal movement, as well as teaching them to identify abnormal patterns.

7. \_\_\_\_\_ - introduces students to principles of assessment and diagnosis, handling techniques, manual therapy and massage and therapeutic exercise. This is usually very much a practical based subject.

8. \_\_\_\_\_ - covers the use of heat and cold in treatment as well as the electrical types of treatments such as therapeutic ultrasound, electrical stimulation, short-wave and microwave diathermy, laser, infrared and ultraviolet radiation.

9. \_\_\_\_\_ - the study of the nervous system. Students learn the functions of the different areas of the brain and spinal cord, and how insult to the nervous system affects normal functioning of the body.

Other subjects may have components of psychology or behavioural sciences, human growth and development, research techniques.

The final years become more specific, with subjects devoted to the major different clinical areas of physiotherapy, including cardiothoracic, musculoskeletal, neurological, paediatrics, gerontology. Students will undertake placements at different health care centres, including acute hospitals, private practice, community health centres or rehabilitation hospitals.

### Discussion:

1. What subjects do you have to study at the Medical School in Brno? Are they the same/similar/different from those required in Australia?
2. Are you satisfied with the balance between theory and practice?
3. Which area of physiotherapy would you like to specialize in (musculoskeletal physiotherapy, cardiothoracic physiotherapy, neurological physiotherapy or other) and why?
4. What about alternative treatment – are you for or against it? Why? Do you have good/bad experience with alternative treatment?



Source: <http://www.physio-net.com/aboutphysio/whatisphysio.htm>

KEY:

**Warm-up:**

1. individual answers

**2. What is physiotherapy?**

Physiotherapy is a healthcare profession directed at evaluating, restoring and/or maintaining physical function. Physiotherapists (or Physical Therapists) have a detailed understanding of how the body works and are university educated. They are trained to assess and improve movement and function. They educate people in how to minimize pain and prevent injury. Physiotherapists promote good health by encouraging their patients/clients to improve and increase their independence.

**3. What type of education does a physiotherapist have?**

A physiotherapist (or physical therapist) has a university degree, a baccalaureate. The courses are very detailed in the areas of anatomy, physiology, pathology in the medical field, cardio-respiratory (heart and lung function), musculo-skeletal (muscle, bones, and exercise), and neurology (cerebral palsy, strokes, head and spinal cord injuries), consulting (return to work, sports injuries) and research (e.g. Muscle strength and rehabilitation).

**4. What types of problem can physiotherapy help?**

Virtually any condition that affects your muscles, joints or nerves. Common problems that can be helped by physiotherapy include: painful conditions such as arthritis; back and neck pain, including whiplash; problems affecting children including cerebral palsy; pregnancy related symptoms such as back pain and stress incontinence; upper limb work related problems, also known as repetitive strain injury (RSI); asthma and other breathing difficulties; sports injuries; strokes and other neurological problems; symptoms of stress and anxiety.

**5. What does the treatment involve?**

Before any action is taken, the physiotherapist will assess your condition, diagnose the problem and help you understand what's wrong. They will work with you to develop an effective treatment plan that takes into account your lifestyle, leisure activities and general health. This will include advice on how you can help yourself, for example, you may be shown exercises that you can do between treatment sessions. Where appropriate, physiotherapists also advise carers how they can help. Physiotherapists use a variety of treatments. For example: exercise programs - designed to improve mobility and strengthen muscles; manipulation and mobilization - to reduce pain and stiffness; electrotherapy - for example, ultrasound to speed up the healing process; acupuncture - used by some physiotherapists qualified to practise this technique; hydrotherapy - exercise in water; massage.

**Exercise 1:** Physiotherapy helps also in treating the following conditions. Match the words.

- |                    |                   |                   |                   |
|--------------------|-------------------|-------------------|-------------------|
| 1. sports          | E. injuries       | 6. stroke         | I. rehabilitation |
| 2. amputee         | C. rehabilitation | 7. spinal cord    | J. injuries       |
| 3. asthma          | D. management     | 8. neurological   | F. conditions     |
| 4. impaired        | A. mobility       | 9. women's        | G. health         |
| 5. chronic airways | B. disease        | 10. back and neck | H. pain           |

**Exercise 2:** Read the text. Complete the headings for each paragraph. Choose the headings from the following list.

1. e    2. c    3. a    4. f    5. b    6. d

**Exercise 3:** Write the appropriate conditions below the correct type of physiotherapy.

<b>Musculoskeletal physiotherapy</b>	<b>Cardiothoracic physiotherapy</b>	<b>Neurological physiotherapy</b>
neck pain	asthma	stroke
sporting injuries	ICU patients	balance disorders
muscle strains	emphysema	Parkinson's disease
joint sprains	chronic bronchitis	spinal cord injuries
arthritis	following cardiac surgery	multiple sclerosis

**Exercise 5A:** Translate the expressions from the text.

- |                                 |                       |
|---------------------------------|-----------------------|
| 1. svalová křeč                 | muscle spasm          |
| 2. pohmožděniny                 | contusions            |
| 3. náprava držení těla          | correction of posture |
| 4. léčba zranění                | treating the injury   |
| 5. chirurgický zákrok           | surgery               |
| 6. ztuhlost, špatná pohyblivost | stiffness             |
| 7. proces hojení                | the healing process   |
| 8. namožení svalu               | muscle strains        |
| 9. ovinutí, omotání páskou      | taping                |
| 10. kloubní výrony              | joint sprains         |

**Exercise 5B:** Translate the expressions from the text.

- |                                |                                   |
|--------------------------------|-----------------------------------|
| 1. cvičební programy           | exercise programs                 |
| 2. kašel                       | coughing                          |
| 3. k dispozici fyzioterapeutům | at the physiotherapists' disposal |
| 4. délka pobytu                | length of stay                    |
| 5. operace hrudníku            | thoracic surgery                  |
| 6. hlavně                      | primarily                         |
| 7. polohování pacienta         | patient positioning               |
| 8. Jednotka intenzivní péče    | ICU                               |
| 9. mající za výsledek          | resulting in                      |
| 10. dýchavičnost               | shortness of breath               |

**Exercise 5C:** Translate the expressions from the text.

- |                              |                               |
|------------------------------|-------------------------------|
| 1. druh poruchy              | the type of disorder          |
| 2. mrtvice                   | strokes                       |
| 3. sanatoria                 | nursing homes                 |
| 4. poruchy rovnováhy         | balance disorders             |
| 5. posouzení a léčba         | the assessment and treatment  |
| 6. znovu nabýt/získat        | regain                        |
| 7. zranění míchy             | spinal cord injuries          |
| 8. postihovat pohyb pacientů | affect the patients' movement |
| 9. zahrnující                | including                     |
| 10. tělocvičny               | gymnasiums                    |

**Exercise 6 - gap fill exercise:** Complete the text with the words from the box.

- |              |              |             |              |                  |
|--------------|--------------|-------------|--------------|------------------|
| 1. degree    | 2. graduates | 3. involve  | 4. treatment | 5. practical     |
| 6. practices | 7. component | 8. lectures | 9. required  | 10. applications |



**Exercise 7:** Complete the correct name of the subject that is studied by physiotherapists.

1. Anatomy
2. Physiology
3. Biology
4. Pathology
5. Physics
6. Kinesiology
7. Physiotherapy Principles
8. Electrotherapy
9. Neuroscience