

Unit 5 Physical Therapy Exercises

Exercising daily plays a main role in the process of healing and recovering from injury or disease. This is the goal of physical therapy exercises. Stretching and strengthening activities are only a few types of physical therapy exercises. Balance, joint control, and muscle re-training are other types of important physical therapy exercises.

Task 1

Fill the gaps with the correct word chosen from below.

increase joints recovery health immune regular cardiovascular

Physical exercise is the performance of some activity in order to develop or maintain physical fitness and overall _____. Frequent and _____ exercise is an important component in the prevention of the diseases such as heart disease, cardiovascular disease, Type 2 diabetes and obesity.

Exercises are generally grouped into three types depending on the overall effect they have on the human body:

1. Flexibility exercises such as stretching improve the range of motion of muscles and _____.
2. Aerobic exercises such as walking and running focus on increasing _____ endurance.
3. Anaerobic exercises such as weightlifting or sprinting _____ muscle strength.

Physical exercise is important for physical fitness including healthy weight, building and maintaining healthy bones, muscles and joints; and strengthening the _____ system. Proper nutrition is at least as important to health as exercise. When exercising it becomes even more important to have good diet to ensure the body has the correct ratio of micro and macronutrients to help the body with the _____ process after exercising.

Adapted from: http://www.sciencedaily.com/terms/physical_exercise.htm

Task 2 Speaking

Choose at least one of the following types of exercises and describe its methods and goals:

Endurance training

Resistance training (strengthening exercises) – isotonic, isometric, isokinetic ex.

Flexibility training

Bed-ridden and convalescing patients: AAROM ex., PROM ex., circulatory ex.

Balance and stability training

Functional mobility training

Gait training

Back school

Aquatic exercises

Relaxation technique

ADL training

HEP training

Task 3:

Read the following instructions how to perform certain exercises. The instructions are mixed up. Put them into a chronological and logical order:

1. Triceps Extension - Strengthens muscles in back of upper arm.

1. Bend raised arm at elbow, bringing hand weight toward same shoulder.
2. Raise one arm straight toward ceiling.
3. Feet flat on floor; keep feet even with shoulders.
4. Support this arm, below elbow, with other hand.
5. Hold position.
6. Slowly re-straighten arm toward ceiling.
7. Slowly bend arm toward shoulder again
8. Sit in chair, near front edge.

2. Hamstrings - Stretches muscles in back of thigh.

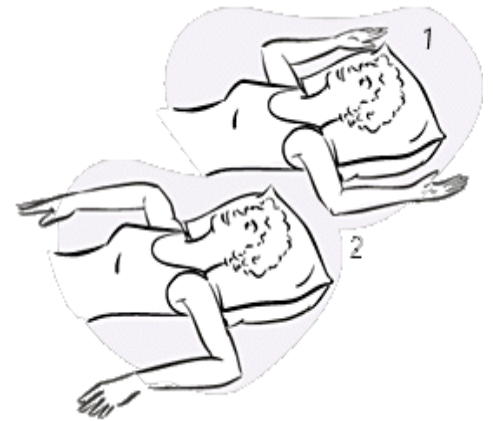
1. Lean forward from hips (not waist) till you feel stretching in leg on bench, keeping back and shoulders straight. Hold position.
2. Repeat with other leg.
3. Straighten back
4. Keep other leg off of bench, with foot flat on floor.
5. Sit sideways on bench.
6. Keep one leg stretched out on bench, straight.

3. Shoulder Rotation

1. Hold position.
2. Stretch arms out to side.
3. Keep shoulders flat on floor.
4. Bend elbows to crook lower arms downward, at right angle.
5. Lie flat on floor, pillow under head.
6. Bend elbows to crook lower arms upward, at right angle.
7. Hold position.

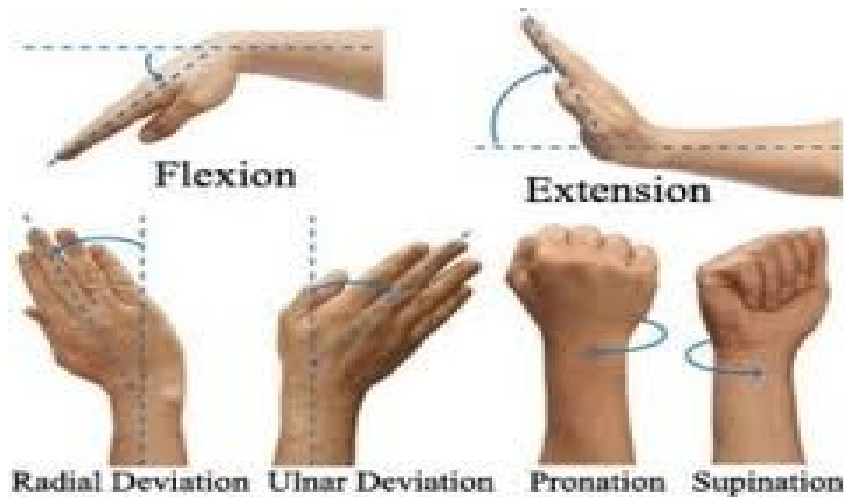
Adapted from:

<http://www.chap.uk.com/pdfs/EXERCISES%20FOR%20OSTEOPOROSIS.pdf>



Source of picture: <http://www.fitnessandfreebies.com/seniors/exercise/shoulder-rotation.html>

Task 4: Look at the pictures and explain the described movements:

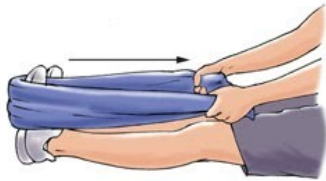


Source of picture: <http://thesandtrap.com/t/65441/photo-radial-deviation-i-cant-do-this-maybe-a-couple-of-degrees>

Task 5:

Here are some pictures of various physiotherapy exercises. First study the pictures properly, then choose 4 pictures and describe how to perform the exercises:

Broken Ankle Rehabilitation Exercises



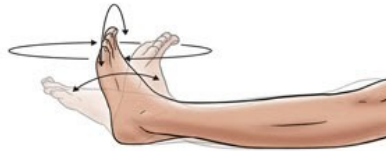
Towel stretch



Standing calf stretch



Standing soleus stretch



Ankle active range of motion



Resisted ankle dorsiflexion

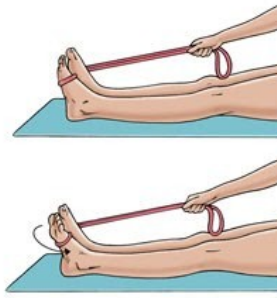


Resisted ankle plantar flexion

Broken Ankle Rehabilitation Exercises



Resisted ankle inversion



Resisted ankle eversion



Heel raise



Step-up

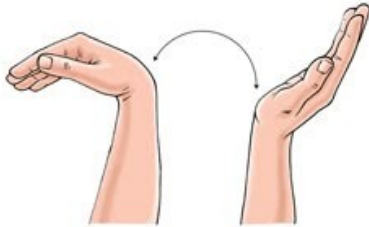


Balance and reach exercise A



Balance and reach exercise B

Medial Epicondylitis (Golfer's Elbow) Rehabilitation Exercises



Wrist active range of motion: Flexion and extension



Wrist stretch



Forearm pronation and supination



Wrist flexion



Wrist extension



Grip strengthening



Forearm pronation and supination strengthening



Resisted elbow flexion and extension

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Patellofemoral Pain Syndrome (Runner's Knee) Rehabilitation Exercises



Wall squat with a ball



Knee stabilization: A



Knee stabilization: B



Knee stabilization: C



Knee stabilization: D



Resisted terminal knee extension



Standing calf stretch



Clam exercise



Iliotibial band stretch (side-bending)

Thigh Bruise and Strain (Quadriceps Contusion) Rehabilitation Exercises



Quad sets



Straight leg raise



Heel slide



Quadriceps stretch



Wall squat



Prone knee bend



Step-up



Lunge

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Now choose some of your classmates to perform the exercises as you describe them.

Source of pictures:

http://www.summitmedicalgroup.com/media/db/relayhealth-images/xanklef1_3.jpg

http://www.summitmedicalgroup.com/media/db/relayhealth-images/xanklef2_3.jpg

<https://sites.google.com/site/activecarephysiotherapyclinic/elbow-exercises>

https://www.google.cz/search?q=patellofemoral+pain+syndrome+rehabilitation+exercises+pictures&espv=2&biw=1280&bih=923&tbm=isch&imgil=bcVQx4O6q4IUOM%253A%253B9Rzmez5yNM4Y2M%253Bhttp%25253A%25252F%25252Ftt.tennis-warehouse.com%25252Farchive%25252Findex.php%25252Ft-457677.html&source=iu&pf=m&fir=bcVQx4O6q4IUOM%253A%252C9Rzmez5yNM4Y2M%252C&usg=__jzrSX2nx0xw468hAREVwQ5bFIBo%3D&ved=0CE0Qyjc&ei=P-BVVdroLYT-UqL5gKAJ#imgrc=bcVQx4O6q4IUOM%253A%3B9Rzmez5yNM4Y2M%3Bhttp%253A%252F%252Ftophealthfaq.com%252Fwp-content%252Fuploads%252F2013%252F02%252FPatellofemoral-Pain-Syndrome-Exercises.jpg%3Bhttp%253A%252F%252Ftt.tennis-warehouse.com%252Farchive%252Findex.php%252Ft-457677.html%3B744%3B963

http://www.summitmedicalgroup.com/media/db/relayhealth-images/xanklef1_3.jpg

http://www.summitmedicalgroup.com/media/db/relayhealth-images/xanklef2_3.jpg

<https://sites.google.com/site/activecarephysiotherapyclinic/elbow-exercises>

<https://www.google.cz/search?q=patellofemoral+pain+syndrome+rehabilitation+exercises+pictures&espv=2&biw=1280&bih=923&tbm=isch&imgil=bcVQx4O6q4IUOM%253A%253B9Rzmez5yNM4Y2M%253Bhttp%25253A%25252F%25252Ftt.tennis-warehouse.com%25252Farchive%25252Findex.php%25252Ft-457677.html%3B744%3B963>

http://actilean.healthinformatics.net/docs/english/art_pages/xthighco.art.asp

Adapted from:

<http://www.orthohyd.com/exercises-yoga>

<http://physicaltherapy.about.com>

http://physicaltherapy.about.com/gi/o.htm?zi=1/XJ&zTi=1&sdn=physicaltherapy&cdn=health&tm=20&gps=255_334_1276_882&f=11&tt=14&bt=0&bts=0&zu=http%3A//weboflife.ksc.nasa.gov/exerciseandaging/chapter4_balance.html

Task 7 Listening – Giving instructions

Pilates Exercises – One-leg stretch

http://www.ehow.com/video_4940402_pilates-exercises-oneleg-stretch.html

Listen to a fitness trainer describing a Pilates exercise and write down as many verbs describing movement as possible.

Follow-up: Complete the gaps with parts of the body.

Rotate your _____ clock-wise / anti-clock-wise

Shrug your _____

Turn your _____ from side to side

Stand with your _____ apart/ shoulder width apart

Keep your _____ straight

Bring/ stretch/ extend your _____ to the side/ overhead/ straight forward

Swing ___ from side to side and around in a circle

Bend forward from your _____ and relax

Clasp your _____ behind your head

Cross _____ over your chest

Lie on your _____, arms at the side, _____ down/up, now bend your _____

Hold your knee with both _____ and pull it towards your _____

Squat on the floor with one _____ bent up against the chest, the other leg stretched out behind

Kneel on the ground, _____ apart

Lift up/ raise your _____.

Adapted from: GOGELOVÁ, Helena. *Angličtina pro fyzioterapeuty*. 1. vyd. Praha: Grada, 2011. 314 s. ; ISBN 9788024735313.

Task 8

- Prepare a set of exercises that will ensure development of all large muscle groups in the body.

- b) Consider a sport and develop exercises applying the overload principle that would develop all the large muscle groups used in the sport.

Task 9 Infinitive or -ing overview

Verb + ing:

delay, fancy, consider, admit, miss, involve, finish, postpone, imagine, avoid, deny, risk, practise, enjoy, suggest, mind, give up, put off, carry on, go on, keep on, can't help /laughing/, dislike, can't stand.

Verb + to:

offer, decide, hope, deserve, attempt, promise, agree, plan, aim, afford, manage, threaten, refuse, arrange, learn, forget, fail, seem, appear, tend, pretend, claim, decide, dare, want, ask, help, expect, beg, tell, remind, force, enable, teach, order, warn, invite, persuade, make, let.

both -ing + infinitive:

begin, start, intend, continue, bother, love, like, hate, can't bear /no difference in meaning/

difference in meaning:

stop + ing = give up the activity /he stopped smoking/

stop + inf. = intent /he stopped to smoke = with the aim to smoke/

advise, recommend, encourage, allow, permit, forbid:

verb + -ing /without an object/

I recommend waiting

verb + object + to:

I recommend **you** to wait

remember + -ing = I did it and now I remember /I remember posting the letter/

remember – to... = not to forget or to realise /please remember to post the letter/

regret + -ing = I am sorry about what I did /I regret saying it/

regret + to... = I'm sorry that I have to... /We regret to inform you.../

go on + -ing = continue /He went on talking/

go on + to.. = do or say something new /After discussing it he went on to talk about economy/

try + -ing = testing /try pressing the button/

try + to.. = attempt, effort /I tried to move the table/

need + -ing = something needs to be done /the floor needs cleaning/

need + to.. = it is necessary /I need to take more exercise/