

## Fitness Theory Exam Review

1. Identify the risk factors for cardio-vascular disease
  - Controllable
  - Uncontrollable
2. What health improvements could be made by being physically active?
3. What behaviours can lead to the risk of illness?
4. A holistic leader engages what three aspects?
5. Describe “active living”.
6. List all of the muscles involved in the following (i.e. the agonist, the assisters and the antagonists):
  - Head/Neck lateral flexion
  - Spine/Trunk extension & flexion
  - Knee flexion & extension
  - Shoulder extension & flexion
  - Shoulder abduction & adduction
  - Medial & lateral rotation of the leg
  - Hip adduction & abduction
  - Hip extension & flexion
  - Dorsi-flexion & Plantar flexion
7. Describe the actions the following muscles generate:
  - Posterior Deltoid
  - Latissimus Dorsi
  - Trapezius (all 3)
  - Gluteus Maximus
  - Gluteus Medius
  - Soleus
  - Rhomboids
  - Gastrocnemius
  - Erector Spinae
  - Quadriceps (all 4)
  - Obliques (both)
  - Medial Deltoid
  - Hamstrings (all 3)
  - Rotator Cuff (all 4)
8. Describe the function of & ways the following knee ligaments may be injured:
  - Anterior & posterior cruciate
  - Medial & lateral collateral
9. Describe each component of fitness (include how to train each and how often to train each).
  - Muscle strength
  - Cardiovascular endurance

- Flexibility
  - Muscle endurance
10. How do you train the following?
- Muscles of the upper arm
  - Muscles around the knee joint
  - Rotator cuff muscles
  - Muscles of the core
11. Describe generally how to change the intensity (i.e. how to make it easier & harder) of the activity below. Give specific examples.
- Squat (standing)
  - Push up (on the floor)
  - Crunch (on the floor)
  - Bicep curl (standing)
12. What muscles contract eccentrically during the following:
- Standing – lowering phase while bending spine forward
  - Floor – lowering phase after a core crunch & twist
  - Standing – lowering phase during a squat
  - Floor – lowering phase of a push-up
13. How does one tear a muscle while stretching? Why does this happen?
14. What joint action occurs during the following?
- Jumping jack – out phase
  - Crunch – down phase
  - Standing on toes
  - Push-up – up phase
  - Standing – bending torso sideways
  - Standing – reaching over head
15. List all movements of the neck.
16. Describe/define the following terms:
- Abduction
  - Flexion
  - Extension
  - Rotation
  - Circumduction
  - Horizontal adduction
  - Anatomical position
  - Concentric contraction
  - Eccentric contraction
  - Isometric contraction
  - Stroke volume
  - Lactic acid
  - Steady state
  - BMI

- PAR-Q
- Overload principle
- Tendons
- Ligaments
- SAID principle
- Proper fitness posture

17. Why perform a post-cardio cool-down (i.e. light to moderate dynamic activity)?
18. What should and should not happen physiologically at the beginning of aerobic exercise?
19. Trace a breath of air through the body while exercising.
20. What positive changes will you see after getting fit? Which one changes the fastest?
21. Target Heart Rate (T.H.R.):
  - What is the equation?
  - Use it to calculate your T.H.R. (between 60% & 90%).
  - What will be your 10-sec reading when working in your T.H.R. zone?
  - When do you “check” your heart-rate?
  - Where is the safest place to check your heart-rate while working out?

22. Energy Systems – fill in the following chart:

<b>Energy System</b>	<b>Fuel to produce ATP</b>	<b>Length of Time</b>	<b>Intensity Level</b>	<b>By-Products</b>
<b>ATP-CP</b> <i>(Anaerobic Alactic)</i>				
<b>Anaerobic Lactic</b>				
<b>Aerobic</b>				

23. List all of the ways you could have your participants monitor their intensity.
24. Pre-screening tools:
  - List examples you could use
  - When/why do we each of them?
25. Stretching:
  - How do you know what to stretch?
  - Identify key safety precautions to follow when stretching.
  - What muscles will need to be stretched after a run?

26. Injuries:
- List the common causes of injuries
  - List activities which could damage your MCL of the knee
  - List activities which could damage your ACL of the knee
  - List general joint safety precautions
  - List specific joint safety precautions for the knee
27. Dynamic stretching is most appropriate stretching during warm-up & static stretching is more effective after aerobic component. **True or False**
28. Canada's Food Guide:
- What are the 4 main food groups?
  - List the servings from each group
29. If you want to burn more energy, you need to (circle correct choice):
- Duration of workout = increase OR decrease
  - Intensity of workout = increase OR decrease
30. How do you set a positive climate for your participants, especially adults?
31. Canada's Activity Guide:
- What is it?
  - The recommended components to train to improve health
  - Staying healthy ranges from \_\_\_\_\_ to \_\_\_\_\_
32. Identify all of the bones and their proper names for the following:
- Spine
  - Arm
  - Leg
33. Analyze and identify the best exercise to train for the following functional activities:
- Getting off the toilet
  - Climbing stairs
34. Breathing:
- What is the proper technique while exercising?
  - Why do we teach this method?
35. Safety issues – why are the following contraindicated & what are the safe alternatives for them?
- Full sit-up
  - Seated twisting
  - Deep squats
  - High speed front arm raises with weights
  - Grabbing on toes during quad stretch
  - Bouncing or ballistic stretching
36. \_\_\_\_\_ is the best way(s) to maintain healthy body weight.

37. Issues with poor posture:

- Muscles to stretch to improve posture
- Muscles to strengthen to improve posture

38. Components of a fitness class – fill in the following chart:

<b>Component</b>	<b>Goals</b>	<b>Length of Time</b>	<b>Key Points</b>	<b>Precautions</b>
<b>Warm-Up</b>				
<b>Cardio</b>				
<b>Post –Cardio Cool-down</b>				
<b>Muscle Strength &amp; Endurance</b>				
<b>Stretch &amp; Relaxation</b>				