

## Physical Activity Course Description in the Preparatory Year of the College of Medicine at Imam Muhammad bin Saud University

I- **Course title:** Health-enhancing Physical Activity (الأنشطة البدنية المعززة للصحة)

II- **Course code:** 101 Act (!!!)

III- **Credit hours:** 1 (2 Contact hours)

IV- **Course prerequisite:** none

V- **Instructor:** XXXXXXXXXXXXXXXX

**Office hours:** XXXXXXXXXXXX

**Phone Number:** XXXXXXXXXXXX

**E-mail:** XXXXXXXXXXXX

**Web cite:** XXXXXXXXXXXX

VI- **Course Times/days:** XXXXXXXXXXXX

VII- **Course description:**

This course is designed to enable students to obtain the knowledge and practical skills necessary for developing and maintaining a health-enhancing level of fitness and to increase physical competence, self-esteem and the motivation to pursue lifelong physical activity. Students participate in a variety of activities that are designed to help them integrate health-enhancing physical activity and health-related physical fitness concepts in planning and implementing a personal fitness program. Students will exhibit a physically active lifestyle through participation in a variety of lifetime health-enhancing physical activities throughout the course. Students will develop responsible personal and social behavior, respect for individual differences in physical activity setting, cooperative skills and appropriate physical activity-related behavior. Students will demonstrate knowledge of the rules, equipment and fitness application in a variety of health-enhancing physical activities. Students will recognize the value of physical activity as an opportunity for enjoyment, challenge, self-expression and social interaction. Throughout this course, weekly lectures are combined with practical sessions and fitness assessment labs to acquaint students with the concepts of lifetime physical activity and fitness as they relate to health and human well-being.

VIII- **Course objectives:**

*Upon successful completion of the course the student should be able to:*

- Understand the benefits and implications associated with participation in lifelong physical activity.
- Know the current recommendations of health-enhancing physical activity.
- Participate regularly in lifetime health-enhancing physical activities.
- Value physical activity and its contributions to a healthy lifestyle.

- Achieve and maintain a health-enhancing level of fitness.
- Design and implements a personal fitness plan based on principles of conditioning and encompasses all components of health-related fitness.
- Apply movement concepts and principles to develop efficient movement skills.
- Demonstrate knowledge of rules, strategies, etiquette, and safety, in a variety of health-enhancing physical activities.
- Demonstrate responsible personal and social behavior in a physical activity setting by exhibiting self-control, cooperative skills, sportsmanship, respect for individual differences, and regard for safety.
- Understand that physical activity provides opportunities for enjoyment, challenge, self-expression, and social interaction.

## **IX- Course content:**

### **Theoretical concepts (lectures):**

- Terminology (physical activity, exercise, physical fitness, energy expenditure, MET, etc..).
- Exercise types (aerobic, resistance and stretching exercise), categories (high versus low impact physical activity) and lifetime physical activity choices.
- MET's values and energy cost for common physical activities (fitness, sports, transportation, work and households activities).
- Health benefits of physical activity.
- Physical activity recommendations (CDC-Surgeon General, ACSM/AHA, and WHO).
- Pre-exercise health screening/risk assessment.
- Components of exercise prescription (type, duration, frequency, intensity, progression, safety).
- Typical exercise session (warm-up, exercise period and cool-down).
- Calculation of exercise intensity based on heart rate and MET. Resting HR, target HR, counting pulse rate.
- Self monitoring of physical activity (HR, accelerometer, pedometer, activity log, etc ..).
- Barriers to physical activity (personal barriers, environmental barriers, etc...).
- Health-related fitness components.
- Fitness plan design and implementation.
- Improving cardiorespiratory fitness, muscular fitness and flexibility.
- Personal fitness testing.
- Simple assessment of body fats content (BMI, waist circumference, skinfold thickness).
- Exercise and weight control, including myth, fallacy and misconceptions in weight loss.
- Choosing fitness products and equipment (treadmill. Bicycle, etc..).
- Evaluating fitness and health clubs facilities, programs and professionals.
- Proper hydration/rehydration for exercise and sports and energy drinks & exercise
- Nutritional supplements and exercise (amino acids, creatine, vitamins, etc...).
- Steroids and other performance enhancement drugs.
- Description of common sport shoes used for walking, running and tennis.

### **Practical sessions:**

*The practical sessions will include a variety of physical activities that can develop and maintain health-related physical fitness (cardiovascular, muscular strength and endurance flexibility and body composition). Emphasis is placed on learning the technique and safety precautions. It is suggested that the practical sessions occupy about one third of the semester. The followings are some examples of the practical sessions:*

#### **Aerobic workout:**

Students will experience challenging cardiovascular exercise. Aerobic classes will include floor routines and aerobic stepping. Upon completion of this course students will understand the benefits of aerobic training, basic aerobic moves, how to measure heart rate, and be able to design aerobic routines

#### **Aqua aerobics:**

A complete low impact cardiovascular toning, flexibility, and strengthening, workout in both shallow and deep water using flotation belts and hand weights. A great way to get fit without pain to joints, knees, or back.

#### **Cardio kickboxing:**

This is an intense cardio aerobic class that utilizes the fundamentals of boxing and kickboxing. Cardio kickboxing can also develop muscular strength and flexibility.

#### **Circuit training:**

This is a good way to tone up and keep fit. The class ranges from skipping to using free weights and from bench stepping to stationary bicycling. Circuit training provides an efficient means of improving cardiovascular condition and muscle tone all in one.

#### **Resistance training:**

It is designed to give a basic understanding of the effects of resistance training on the human body, using various strength exercises with dumbbells, body weight, exercise bands and tubing, medicine balls, fit balls and on the machines. The session will include a combination of instructions, demonstrations, and hand-on practice. The student will understand the fundamentals of lifting with strong emphasis on using proper form and breathing technique, as well as being able to operate all resistance equipments, and develop resistance training protocols.

#### **Swim Conditioning:**

Students will increase level of cardiovascular endurance, improve stroke and turn techniques and increase understanding of basic principles of aerobic training through successful completion of swimming workouts.

#### **Badminton:**

Fundamental skills of badminton necessary to play and enjoy the game. Content includes offensive and defensive skills, singles and doubles strategy and play, rules, scoring and etiquette.

#### **Tennis:**

Fundamental tennis strokes (forehand, backhand, and serve) and coverage of the rules, scoring, strategy and etiquette necessary for singles and doubles game play.

**X- Instructional methods and teaching strategies:**

*A variety of instructional methods and teaching strategies will be used during both the theoretical concepts and practical sessions, in order to accommodate all learning styles. This may include the following:*

- Lectures
- Demonstrations - by teacher, student(s), or experts
- Modeling
- Guided practice
- Group discussion
- Peer coaching
- Reciprocal teaching
- Checklists
- Video (peer and self-analysis)
- Guided discovery
- Stations and circuits
- Task cards
- Handouts and Written Assignments

**XI- Materials needed for teaching this course:**

- Computer projector
- White board
- Pedometers
- Stopwatches
- Weighing scale
- Non-stretchable measuring tape for waist measurement
- Medicine balls - variety of sizes and weights
- Stopwatches
- Stationary bikes (e.g.: Monark)
- Treadmill
- Steps for step aerobics (or Swedish benches)
- Jump ropes
- Mats
- Dumbbells and barbells
- Elastic bands
- Metronome
- Various weight machines and resistance training equipments
- Plastic cones

## XII- Outcomes:

*As a result of participating in this course, it is reasonable to expect that the student will be able to:*

- Define health-enhancing physical activity and all components of physical fitness.
- Possess the ability to calculate energy expenditure during common forms of health enhancing physical activities.
- Identify long-term health-enhancing benefits of physical activity
- Apply basic health-related fitness concepts to design and implement a safe and effective personal fitness program based on current fitness status.
- Develop the ability to monitor personal fitness level and set fitness goals through an understanding of the principles related to physical fitness and physical activity programs, track progress, and make adjustments to such a personal fitness plan.
- Identify and participate in several modes of exercise that can be used for a lifetime.
- Establish an interest in continuing a health and fitness program.
- Demonstrate an understanding of proper weight training principles and concepts
- Distinguish between body weight and body composition and describe principles of safe weight loss.
- Acquire the criteria for evaluating fitness centers, health clubs and fitness products.
- Understand the proper fluid replacement choice during physical activity.
- Explain the danger and side effects of performance-enhancement drugs.

## XIII- Assessment/Evaluation:

*Student achievement in this course will be measured using multiple assessment tools including but not limited to:*

• Attendance and participation	10%
• 2 Mini quizzes	10% (5% each)
• Activity log *	10%
• Fitness plan **	10%
• Mid-term exam	20%
• Final exam	40%
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Total	100%

\* *Using a pencil and a specific sheet provided by the instructor, student records the time (in minute) spent in his daily physical activity from early in the morning till bed time for the whole week (week 5 or 6 of this term). Then, assign each activity a MET value. Multiply the time by MET value for each activity to obtain MET's minutes. Add each day MET's min for the whole week to get MET's min per week.*

\*\* *This is a personal plan for improving health-related fitness of the student, and must be handed-in to the instructor one week before the end of the semester.*

#### XIV- Academic Integrity/Honesty:

All students participating in this educational course are expected to pursue honesty and integrity in all aspects of their academic work and assignments. Academic dishonesty, including plagiarism and cheating, will not be allowed. Such misconduct will be handled according to the procedures set forth by the University by law.

#### XV- Topical Course Timetable:

Week	TOPIC	Assignment
1	<b>Lecture</b> <ul style="list-style-type: none"><li>• Introduction to the course:<ul style="list-style-type: none"><li>• Review Syllabus</li><li>• Grading Policy and Dress Policy</li><li>• Instructions on the activity log and fitness plan</li><li>• Terminology<ul style="list-style-type: none"><li>• Physical activity, exercise, aerobics, physical fitness, energy expenditure, MET, etc...</li></ul></li><li>• Pre-exercise health screening/risk assessment</li></ul></li></ul>	<ul style="list-style-type: none"><li>• GET your Reference and Reading Resources!</li><li>• Activity log can be substituted with pedometer log (check with instructor)</li><li>• Turn in your pre-exercise screening sheet next week</li></ul>
2	<b>Lecture</b> <ul style="list-style-type: none"><li>• Exercise types (aerobic, resistance and stretching exercise), categories (high versus low impact physical activity) and lifetime physical activity choices</li><li>• Physical activity recommendations (CDC-Surgeon General, ACSM/AHA, and WHO)</li><li>• Health benefits of physical activity</li><li>• MET's values for common physical activities (fitness, sports, transportation, work and households activities)</li><li>• How to calculate energy cost (per K. calorie) of an activity from MET value</li></ul>	<ul style="list-style-type: none"><li>• Read class notes (will be provided)</li><li>• Read international physical activity recommendations</li><li>• Practice estimating MET values and energy cost for a variety of health-enhancing physical activity</li></ul>
3	<b>Lecture</b> <ul style="list-style-type: none"><li>• Components of exercise prescription (type, duration, frequency, intensity, progression, safety)</li><li>• Typical exercise session (warm-up, exercise period and cool-down)</li><li>• Equations for predicting maximal heart rate</li><li>• Calculation of exercise intensity based on heart rate and MET. Resting HR, target HR, counting pulse rate.</li><li>• Self monitoring of physical activity (HR, accelerometer, pedometer, activity log, etc , with emphasis on simple and practical measures like pedometers and activity records..)</li></ul>	<ul style="list-style-type: none"><li>• Read class notes (will be provided)</li><li>• Read pertinent references materials and resources</li><li>• Practice calculating exercise target heart rate using the equations provided to you in this class</li></ul>

4	<p><b>Practical session</b></p> <ul style="list-style-type: none"> <li>• Measurement of pulse rate by radial and carotid palpation</li> <li>• <i>Aerobic workout</i> or <i>Aqua aerobics</i></li> </ul>	<ul style="list-style-type: none"> <li>• Must wear sport outfit and sport shoes</li> <li>• Practice measuring your pulse rate</li> <li>• Apply your knowledge of target heart rate to engage in a moderate intensity cardiovascular workout</li> </ul>
5	<p><b>Lecture</b></p> <ul style="list-style-type: none"> <li>• Components of health-related physical fitness</li> <li>• Fitness plan design and implementation</li> <li>• Developing cardiorespiratory fitness</li> <li>• Common simple tests for measuring CV endurance</li> </ul>	<ul style="list-style-type: none"> <li>• Read class notes (will be provided)</li> <li>• Read pertinent references materials and resources</li> <li>• <i>Start working on your fitness plan project</i></li> </ul>
6	<p><b>Practical session</b></p> <ul style="list-style-type: none"> <li>• Cardio kickboxing, swim conditioning, badminton, or indoor tennis workout</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Turn in your activity log</i></li> <li>• Wear sport outfit and sport shoe</li> <li>• Prepare yourself for the mid-term exam</li> </ul>
7	<p><b>Combined Lecture &amp; Practical Session</b></p> <ul style="list-style-type: none"> <li>• The importance of flexibility in health and disease</li> <li>• Developing flexibility (dynamic versus static stretching) with practical stretching exercise</li> <li>• Simple tests for assessing flexibility</li> <li>• Proper and improper stretching exercises</li> <li>• Flexibility Guideline and low back</li> <li>• Brief description of important specifications of common sport shoes used for walking, running and tennis (distribute leaflets on sport shoes)</li> </ul>	<ul style="list-style-type: none"> <li>• Wear sport outfit and sport shoes</li> <li>• Read class notes (will be provided)</li> </ul>
8	<p><b>Written Mid-term Exam</b></p>	<ul style="list-style-type: none"> <li>• Read previous topics using class notes and references</li> </ul>
9	<p><b>Lecture</b></p> <ul style="list-style-type: none"> <li>• Mid-term exam results and reflections</li> <li>• <b>Discussion:</b> Results of activity log with discussion on how to increase time spent active and to reduce inactivity</li> <li>• Barriers to physical activity</li> </ul>	<ul style="list-style-type: none"> <li>• Think of ways to increase your daily activity and reduce your time spent inactive</li> </ul>
10	<p><b>Lecture</b></p> <ul style="list-style-type: none"> <li>• Resistance Training Principles &amp; Guidelines</li> <li>• Sets/Repetitions/intensity/safety</li> <li>• Major Muscles to strength train</li> <li>• Designing a resistance training program for developing muscular strength and power</li> </ul>	<ul style="list-style-type: none"> <li>• Read class notes (will be provided)</li> <li>• Read pertinent references materials and resources</li> </ul>

	<ul style="list-style-type: none"> <li>• Steroids and other performance enhancement drugs</li> </ul>	
11	<b>Combined Lecture &amp; Practical Session</b> <ul style="list-style-type: none"> <li>• Resistance training demonstration and practice using variety of modes</li> <li>• Safety techniques (proper body alignment, lifting techniques and proper breathing techniques)</li> <li>• Nutritional supplements and exercise (amino acids, creatine, vitamins, etc...)</li> </ul>	<ul style="list-style-type: none"> <li>• Wear sport outfit and sport shoes</li> <li>• <i>Observe safety</i></li> </ul>
12	<b>Lecture</b> <ul style="list-style-type: none"> <li>• Body Composition in health and disease</li> <li>• Simple assessment of body fats content (BMI, waist circumference, skinfold thickness)</li> <li>• Determining body weight, body fat, and desirable weight</li> <li>• Proper hydration/rehydration for exercise and sports and energy drinks &amp; exercise</li> </ul>	<ul style="list-style-type: none"> <li>• Read class notes (will be provided)</li> <li>• Read pertinent references materials and resources</li> </ul>
13	<b>Practical session</b> <ul style="list-style-type: none"> <li>• Circuit training</li> </ul>	<ul style="list-style-type: none"> <li>• Wear sport outfit and sport shoes</li> </ul>
14	<b>Lecture</b> <ul style="list-style-type: none"> <li>• Exercise and weight control, including myth, fallacy and misconceptions of some weight loss methods</li> <li>• Choosing fitness products and equipment (treadmill, bicycle, etc..)</li> <li>• Evaluating fitness and health clubs facilities, programs and professionals.</li> </ul>	<ul style="list-style-type: none"> <li>• Read class notes (will be provided)</li> <li>• Read pertinent references materials and resources</li> </ul>
15	<b>Practical Session</b> <ul style="list-style-type: none"> <li>• Swimming, indoor Tennis, Badminton, or similar health-enhancing physical activity (emphasis should be on learning basics and conditioning)</li> </ul>	<ul style="list-style-type: none"> <li>• Wear sport outfit and sport shoes</li> </ul>
16	<p style="text-align: center;"><b>WRITTEN FINAL EXAM</b></p>	<ul style="list-style-type: none"> <li>• Read topics covered in your exam</li> </ul>



## XVI- References and Resources:

### • In Arabic

- 1- الهزاع، هزاع محمد. التهيئة البدنية: الاسس العلمية لوصفة النشاط البدني بغرض الصحة وتنمية اللياقة البدنية. الرياض: مطابع سمحة، 1421هـ .
- 2- الهزاع، هزاع محمد. الصحة واللياقة البدنية. كتاب وقائع ندوة اللياقة البدنية. الرياض: الرئاسة العامة لرعاية الشباب، 1410هـ: 39-49.  
<http://faculty.ksu.edu.sa/hazaa/DocLib2/Forms/AllItems.aspx>
- 3- الهزاع، هزاع محمد. النشاط البدني والوقاية من الأمراض المزمنة. المجلة العربية للغذاء والتغذية، 2004، ملحق 5: 141-161.  
<http://faculty.ksu.edu.sa/hazaa/DocLib2/Forms/AllItems.aspx>
- 4- الهزاع، هزاع محمد، و محمد الأحمدى. قياس النشاط البدني والطاقة المصروفة لدى الإنسان: الأهمية وطرق القياس الشائعة. مركز البحوث التربوية، كلية التربية، جامعة الملك سعود، 2004.  
<http://faculty.ksu.edu.sa/hazaa/DocLib2/Forms/AllItems.aspx>
- 5- الهزاع، هزاع محمد. النشاط البدني في مواجهة أمراض النمط المعيشي: توجه صحي معاصر .  
<http://faculty.ksu.edu.sa/hazaa/DocLib2/Forms/AllItems.aspx>
- 6- الهزاع، هزاع محمد. وصفة النشاط البدني بغرض تنمية عناصر اللياقة البدنية المرتبطة بالصحة.  
<http://faculty.ksu.edu.sa/hazaa/DocLib2/Forms/AllItems.aspx>
- 7- الهزاع، هزاع محمد . هرم النشاط البدني وصحة الإنسان.  
<http://faculty.ksu.edu.sa/hazaa/DocLib2/Forms/AllItems.aspx>
- 8- الهزاع، هزاع محمد . ممارسة النشاط البدني: أيهما أفضل في الصباح أم في المساء؟.  
<http://faculty.ksu.edu.sa/hazaa/DocLib2/Forms/AllItems.aspx>
- 9- الهزاع، هزاع محمد . دليلك لاختيار نادياً صحياً أو مركزاً للياقة البدنية.  
<http://faculty.ksu.edu.sa/hazaa/DocLib2/Forms/AllItems.aspx>
- 10- الهزاع، هزاع محمد . كيفية اختيار أجهزة اللياقة البدنية المنزلية.  
<http://faculty.ksu.edu.sa/hazaa/DocLib2/Forms/AllItems.aspx>
- 11- الهزاع، هزاع محمد . ممارسة النشاط البدني: قبل الأكل أم بعده؟:  
<http://faculty.ksu.edu.sa/hazaa/DocLib3/Forms/AllItems.aspx>
- 12- الهزاع، هزاع محمد . دورات تدريبية حول وصفة النشاط البدني في الصحة والمرض:  
<http://faculty.ksu.edu.sa/hazaa/DocLib3/Forms/AllItems.aspx>

- **In English:**

- 13- Ainsworth B, Haskell W, Whitt M, Irwin M, et al. Compendium of physical activity: an update of activity codes and MET intensities. *Med Sci Sports Exerc* 2000; 32 (suppl): S 498-S 516.
- 14- Al-Hazzaa H. The prevalence of physical inactivity in Saudi Arabia: a brief review. *Eastern Mediterranean Health J* 2004; 10 (4/5): 663-670.
- 15- Al-Hazzaa H. Health-enhancing physical activity among Saudi adults using IPAQ. *Journal of Public Health Nutrition* 2007; 10 (1): 59-64.
- 16- ACSM Guidelines for Exercise Testing and Prescription. Baltimore: Lippincott Williams & Wilkins, 2000.
- 17- ACSM's Resource Manual for Guidelines for Exercise Testing and Prescription, 5<sup>th</sup> edition.
- 18- 'At least five a week: Evidence on the impact of physical activity and its relationship to health'. A report from the Chief Medical Officer. April 2004. (Can be downloaded from [www.dh.gov.uk/publications](http://www.dh.gov.uk/publications)).
- 19- Bijnen F, Caspersen C, Mostard W. Physical inactivity as a risk factor for coronary heart disease: a WHO and International Society and Federation of Cardiology position statement. *Bull WHO* 1994; 72 (1): 1-4.
- 20- Blair S, Booth M, Gyarfás I, Iwane H, et al. Physical activity initiatives internationally. *Sports Med* 1996; 21: 157-163.
- 21- Caspersen C. Physical activity epidemiology: concepts, methods and applications to exercise science. *Exerc Sports Sci Rev* 1989; 17: 423-473.
- 22- Giannuzzi P, Mezzani A, Saner H, Bjornstad H, Fioretti P, Mendes M, et al. Physical activity for primary and secondary prevention. Position paper of the Working Group on Cardiac Rehabilitation and Exercise Physiology of the European Society of Cardiology. *Europ J Cardiovas Prev Rehab* 2003; 10: 319-327.
- 23- Haskell W, Lee I-Min, Pate R, Powell K, et al. Physical activity and public health: updated recommendation for adults from the American College of Sports Medicine and the American Heart Association. *Med Sci Sports Exerc* 2007; 39: 1423-1434.
- 24- Heyward A. Advanced Fitness Assessment and Exercise Prescription, 5<sup>th</sup> edition, 2002.
- 25- Hoeger W, Hoeger S. Principles and Labs for Fitness and Wellness. Englewood, CO: Morton Publishing Comp, 2007.
- 26- Howley E. Type of activity: Resistance, aerobic and leisure versus occupational physical activity. *Med Sci Sports Exerc* 2001; (suppl) 33: S 364-S 369.
- 27- Howley E, Franks D. Health Fitness Instructor's Handbook, 4<sup>th</sup> edition, 2003.
- 28- Pate R, Pratt M, Blair S, Haskell W, Macera C, Bouchard C, et al. Physical activity and public health. A recommendation from the Centers for Disease Control and Prevention and the American College of Sports Medicine. *J Am Med Assoc* 1995; 273 (5): 402-407.
- 29- Pollock M, Gaesser G, Butcher J, Despres J, Dishman R, Franklin B, Garber C. ACSM Position Stand. The recommended quantity and quality of exercise for developing and maintaining cardiorespiratory and muscular fitness and flexibility in healthy adults. *Med Sci Sports Exerc* 1998; 30: 975-991.

- 30- Sharkey B. Fitness and Health. Champaign, IL: Human Kinetics, 2007.
- 31- U.S. Dept. of Health and Human Services. Physical Activity and Health: A Report of the Surgeon General. Atlanta, GA; U.S. Dept of Health & Human Services, 1996.
- 32- World Health Organization. *Global Strategy on Diet, Physical Activity and Health*. WHA57.17. Geneva, Switzerland: WHO, 2004.
- 33- World Health Organization. *Active Living- the challenge a head: Developing active living policies and programs in over 50 countries by the end of 2001*. Geneva, Switzerland: WHO, 1999.

## XVII- Helpful internet sites

### • Arabic:

- مصادر متنوعة حول النشاط البدني باللغة العربية (استمارات الجاهزية لممارسة النشاط البدني، الخ):  
<http://faculty.ksu.edu.sa/hazaa/Pages/Resources.aspx>
- مقالات علمية متنوعة باللغة العربية حول النشاط البدني والصحة:  
<http://faculty.ksu.edu.sa/hazaa/Pages/Forms/AllItems.aspx>
- وثائق علمية باللغة الإنجليزية:  
<http://faculty.ksu.edu.sa/hazaa/Resources/Forms/AllItems.aspx>

### • English:

- American College of sports Medicine. <http://www.acsm.org>
- American Heart Association. <http://www.aha.org>
- 2008 Physical Activity Guidelines for Americans. <http://www.health.gov/PAGuidelines/>
- The President Council on Physical Fitness and Sports.  
[http://www.fitness.gov/resources\\_health.htm](http://www.fitness.gov/resources_health.htm)
- International Federation of Sports Medicine. <http://www.fims.org>
- World Health Organization, Global Strategy on diet and Physical Activity.  
<http://www.who.int/dietphysicalactivity/en/>
- Center for Disease Control and Prevention (CDC), Division of Nutrition, Physical Activity and Obesity. <http://www.cdc.gov/nccdphp/dnpa/>
- The National Association for Health and Fitness (NAHF)  
<http://www.physicalfitness.org/>
- The Medical Fitness Association  
<http://www.medicalfitness.org/displaycommon.cfm?an=1#about>
- Exercise and Physical Fitness.

<http://www.nlm.nih.gov/medlineplus/exerciseandphysicalfitness.html>

- National Center for Chronic Disease Prevention and Health Promotion. Healthy Youth Cites: <http://www.cdc.gov/HealthyYouth/physicalActivity/links.htm>
- Promotion of physical activity among adults: Evidence into practice briefing: [http://www.nice.org.uk/aboutnice/whoweare/aboutthehda/hdapublications/promotion\\_of\\_physical\\_activity\\_among\\_adults\\_evidence\\_into\\_practice\\_briefing.jsp](http://www.nice.org.uk/aboutnice/whoweare/aboutthehda/hdapublications/promotion_of_physical_activity_among_adults_evidence_into_practice_briefing.jsp)
- Florida Department of Health (Materials on physical activity):. <http://www.doh.state.fl.us/Family/Physical/index.html>
- Participaction (Canadian Site): <http://www.participaction.com/index.htm>
- Physical Activity for Health (patient UK): <http://www.patient.co.uk/showdoc/23068734/>
- Physical Activity Materials from American heart Association: <http://www.americanheart.org/presenter.jhtml?identifier=2155>
- Walking: A Step in the Right Direction: <http://win.niddk.nih.gov/publications/walking.htm>
- Physical Activity and Weight Control: <http://win.niddk.nih.gov/publications/physical.htm>
- Exercise Benefits-Mayo=Clinics: <http://www.mayoclinic.com/health/exercise/HQ01676>
- CDC Publication- Physical activity: <http://www.cdc.gov/HealthyYouth/physicalActivity/publications.htm>
- Public Health Agency of Canada- Materials on Physical activity: [http://www.phac-aspc.gc.ca/pau-uap/fitness/work/supp\\_material\\_e.html](http://www.phac-aspc.gc.ca/pau-uap/fitness/work/supp_material_e.html)
- The Canadian Fitness and Lifestyle Research Institute (CFLRI) <http://www.cflri.ca/>
- Canadian Society for Exercise Physiology (Physical Activity Guides): <http://www.confmanager.com/main.cfm?cid=574&nid=5138>
- America on the Move: [http://aom.americaonthemove.org/site/c.krLXJ3PJKuG/b.1524891/k.C834/About\\_Us.htm](http://aom.americaonthemove.org/site/c.krLXJ3PJKuG/b.1524891/k.C834/About_Us.htm)