

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



دانشگاه تربیت دبیر شهید رجائی

انگلیسی برای دانشجویان فیزیولوژی ورزشی

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For Sport

Physiology Students

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پیش‌گفتار

تربیت بدنی و علوم ورزشی در مسیر پرپیچ و خم خود و در هزاره سوم، به علم روز دنیا تبدیل شده است. از آنجا که انسان سالم، محور اصلی توسعه می‌باشد، هدف این رشته همراه با گرایش‌های مختلف (روانشناسی، یادگیری و . . . فیزیولوژی ورزشی) کمک به سلامت انسان است. طبیعی است که دانشجویان این رشته به دنبال راه‌هایی باشند که بتوانند به آخرین منابع علمی دسترسی یافته، از تجربه دیگران استفاده کرده و یافته‌های خود را نیز منتقل نمایند. سال‌هاست گرایش فیزیولوژی ورزشی و فعالیت‌های بدنی، جای خود را در رشته‌های دانشگاهی کشور باز کرده و توانایی‌های خود را در جامعه ورزشی و پزشکی به اثبات رسانده است.

به موازات گرایش و توسعه این رشته در اکثر دانشگاه‌های کشور، نیاز به کتاب‌های دانشگاهی ضرورتی انکارناپذیر است. خوشبختانه در سال‌های اخیر چاپ کتاب‌های ورزشی در موضوعات مختلف افزایش یافته و در زمینه ترجمه متون تخصصی و تسلط دانشجویان نیز، انواع مطالب منتشر شده‌اند.

کتاب حاضر با هدف آشنایی دانشجویان گرایش فیزیولوژی با متون تخصصی آماده شده است. بدیهی است راهنمایی اساتید ارجمند بر غنای هرچه بیشتر این کتاب خواهد افزود.

وظیفه خود می‌دانم از راهنمایی‌های هوشمندانه جناب آقای دکتر عباسعلی گائینی استاد تمام دانشکده تربیت بدنی دانشگاه تهران و همکاری‌های معاونت پژوهشی و فناوری دانشگاه شهید رجائی، جناب آقای دکتر عظمتی و همکاران ایشان که با بردباری و حسن نیت به چاپ کتاب حاضر کمک کردند، تشکر ویژه بنمایم.

دکتر علیرضا رضانی

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CHAPTER ONE

Physical Activity

SECTION 1

PART I: PRE-READING

A. Pronunciation practice

Response	/rɪspɑns/
Adaptation	/ˈɒd əptetʃən/
Stress	/stres/
Acute	/əkju:t/
Chronic	/kraɪnɪk/
Regular	/regjʊlə /
Participation	/pɑ:tɪsɪpeɪʃən/
obese	/əʊbi:s /
Decline	/dɪklaɪn/
Sedentary	/sedentri/
Vigorous	/vɪgərəs/
Morbidly	/mɒrbɪdli/

B. Word Study: Definitions

Maintenance: state or process consists of making sure that it continues.

Disability: a disability is a severe physical or mental illness that restricts the way that you can live your life.

Rehabilitate someone who has been ill or in prison means to help them to live a normal life again.

Acute: very intense or severe.

Chronic: a chronic illness lasts for a very long time.

Anxiety: anxiety is feeling of nervousness or worry.

Stress: stresses are strong physical pressures applied to an object.

Addicted: someone who is addicted to a harmful drug cannot stop taking it.

Autonomous: an autonomous country, organization, or group governs or controls itself rather than being controlled by anyone else.

PART II. READING ONE

Exercise physiology is the identification of physiological mechanisms underlying physical activity the comprehensive delivery of treatment services concerned with the analysis, improvement, and maintenance of health and fitness, rehabilitation of heart disease and other chronic disease and or disabilities, and professional guidance and counsel of

athletes and others interested in athletics, sports training , and chronic exercise.

SO: exercise physiology is:

- The study of the body's responses and its adaptation to the stress of exercise.
- Concerned with the investigation of both acute and the chronic effects of exercise.
- Muscular system, nervous system, respiratory system and cardiovascular system.

Why do people Exercise?

- Weight control
- Reduced risk of cardiovascular disease
- Reduction in anxiety, stress, and depression
- Enhanced mood
- Bogeymen
- Building self-esteem
- Socializing
- Not everyone is “addicted” or an autonomous exerciser
- Most people struggle with exercise motivation
- Variety of motives for exercising

Why do people not exercise?

- Various barriers to physical activity
- Major, moderate, & minor barriers
- Environmental or individual
- Major barriers
- Perceived lack of time
- Lack of energy
- Lack of motivation

- Moderate barriers
 - Excessive cost
 - Illness, Injury
 - Lack of nearby facilities
 - Feeling uncomfortable
 - Lack of skill
 - Fear of injury
 - Minor barriers
 - Lack of safe spaces
 - Lack of chilled care
 - Lack of a partner
 - Lack of support
 - Lack of transportation
 - Almost 50% of US adults are sedentary.
-
- 25% of kids and adults report no vigorous physical activity.
 - Only 10 – 15% of adults regularly participate in vigorous physical activity
 - 3 times per week, at least 20 minutes.
 - Only 10% of adults plan to begin exercising within a year.
 - Almost 50% of people who begin an exercise program will dropout within six months.
 - About 70% of overweight kids will become overweight adults.

1998 – 1994

7% of kids ages 2- 5 overweight
 11% of kids ages 6- 19 overweight
 23% of adults obese
 56% of adults overweight
 3% of adults morbidly

1999 - 2000

10% of kids 2 – 5 overweight
 15% of kids 6 -9 overweight
 31% of adults obese
 65% of adults overweight
 5% of adults morbidly obese

COMPREHENSION QUESTIONS*Answer the following questions:*

- 1- What is exercise physiology?
- 2- Why do people exercise?
- 3- Why don't people exercise?
- 4- What are Major barriers to physical activity?
- 5- What are minor barriers to physical activity?

Find the Farsi equivalents for the following technical terms and write them down in the spaces provided.

Identification -----	Athletic -----
Underlying -----	Cardiovascular -----
Comprehensive -----	Disease -----
Treatment -----	Autonomous -----
Disabilities -----	Sedentary -----
Guidance -----	Participate -----
Counsel -----	Adults -----
Investigation -----	Overweight -----
Adaptation -----	Obese -----
Addict -----	Morbidly -----

SECTION 2

PART I: PRE-READING

A. Pronunciation practice

Struggle	/str^gl/
Motivation	/məʊtɪveɪʃən /
Variety	/vəraɪəti/
Reduce	/rɪdju:s/
Mood	/mu:d/
Moderate	/mɒdərət/
Excessive	/ɛksesɪv/
Illness	/ɪlnəs/
Injury	/ɪndʒəri/
Nearby	/nɪəbaɪ/
Facility	/fə'sɪlɪti /
Uncomfortable	/ʌnkʌmpfətəbl/
Skill	/skɪl/

B. Word Study: Definitions

Lean: when you lean in a particular, direction, you bend your body in that direction.

Training: training also involves doing exercises and eating special foods in preparation for an activity such as a race.

- Stretch:* when you stretch, you hold your arms or legs out straight and tighten your muscles.
- Sedentary:* a sedentary occupation or way of life involves a lot of sitting down and not much exercise.
- Prolonged:* a prolonged event or situation continues for long time.
- Lifestyle:* your lifestyle is the way you live, for example the things you normally do.
- Yoga:* is a type of exercise in which you move your body into various positions in order to become more fit or flexible, to improve your breathing, and to relax your mind.
- Balance:* if someone or something balances or is balanced, they are steady and do not fall over.

PART II. READING TWO

Exercise: Definition

Exercise is physical exertion of the body. The aim of exercise is to achieve a beneficial level of fitness and health, both physically and mentally.

Many people think that exercise is all about joining a gym, but there are many different ways of exercise, each with varying benefits and effects. Some of the most popular forms of exercise are outlined below.

Walking

Most people walk every day but it is often overlooked as an exercise activity. Walking is one of the easiest, and cheapest, ways to improve your fitness. It is a cardiovascular exercise, which means it improves the condition of your heart and lungs. It is also a weight bearing activity, meaning that it

helps to improve your density. Walking works the muscles of your lower impact, which means, it does not put stress on your joints. Walking can be done anywhere, try walking up and down hills for more of a work out. You can also try **walking**, which is fast walking that uses more energy than running at the same pace.

Running and jogging

Running and jogging are very popular and effective ways to exercise. There is little difference between running and jogging, although jogging often refers to running at a slower pace. Running is a high impact activity, which means it will improve your bone density. But it also puts considerable stress on your joints, particularly if you are overweight. If this is the case, talk to your GP first. Start by walking briskly and build slowly up to a run, you should still be able to hold a conversation but it should feel harder than walking. Gradually increase the length of running time as you feel it getting easier.

Swimming

Swimming is another accessible and reasonably cheap way to exercise which can help you a cardiovascular work out. The resistance of the water is very effective at burning fat and works most of the major muscle groups. It is low impact as weight is support by the water and you can do it your own pace.

Cycling

If you have access to a bike, cycling can be an effective way of burning energy and managing your weight. Cycling also has cardiovascular benefits and because your weight is supported by the bike, it is a none-weight bearing exercise. This means it is a good form of exercise for people with bone or joint conditions.

Weight training

Weight training is a form of exercise that is used to increase body mass, muscle strength, size and endurance. It involves using machine weights or free weights (barbells and dumbbells) to lift weight using slow, controlled movements. As weight training is essentially an anaerobic (without oxygen) it is not as beneficial to the heart as aerobic or cardiovascular exercise, but it does help to increase overall fitness. Anaerobic exercises are most effective when combined with other types of exercise.

Yoga and Pilates

Stretching is an exercise routine in its own right. These types of exercise improve balance, flexibility, circulation and posture. Yoga is an ancient Indian system, which aims to unify the mind, body and spirit. Modern, westernized yoga is practiced using a combination of meditation, breathing and posture exercises and can be tailored to meet the needs of those with conditions such as asthma, arthritis and back pain. Pilates is similar, but focuses on the core abdominal (stomach) and back muscles.