

4-18-2012

Research exercise: This display is about these career fields projected 10 years into the future: Exercise Physiology, Athletic Training, Occupational Therapy and Physical Therapy

Follow this and additional works at: https://ecommons.udayton.edu/stander_posters

Recommended Citation

"Research exercise: This display is about these career fields projected 10 years into the future: Exercise Physiology, Athletic Training, Occupational Therapy and Physical Therapy" (2012). *Stander Symposium Posters*. 54.
https://ecommons.udayton.edu/stander_posters/54

This Book is brought to you for free and open access by the Stander Symposium at eCommons. It has been accepted for inclusion in Stander Symposium Posters by an authorized administrator of eCommons. For more information, please contact frice1@udayton.edu, mschlangen1@udayton.edu.



Career fields 10 years into the future: *Occupational Therapy, Athletic Training, Exercise Physiology and Physical Therapy*

Sam Dresmann, Annie Allen, Nikki Sarkisian & Kevin Bogenschutz

Advisor: Professor Ganote

Occupational Therapy Job Overview

Occupational therapists help people who have physical, mental, or cognitive disabilities learn to do everyday activities. They work in hospitals, schools, and community centers. They assess patients' needs and develop treatment plans to help them perform tasks like dressing, eating, and working. They also provide rehabilitation services to help people recover from injuries or illnesses.



Athletic Trainers: What do they do?

What Athletes Expect An Athletic Trainer To Do:

- 1. Provide first aid and emergency care
- 2. Prevent injuries and manage acute and chronic injuries
- 3. Provide rehabilitation services
- 4. Provide education on injury prevention
- 5. Provide counseling and support

Important Skills Required for the Job:

- 1. An applied knowledge of anatomy
- 2. Good communication skills
- 3. Good problem-solving skills
- 4. Ability to work in a team
- 5. Ability to work in a high-pressure environment



Exercise Physiology...

Exercise physiology is the study of the body's response to physical activity. It involves understanding how the body uses energy, how it transports oxygen and nutrients, and how it removes waste products. This knowledge is used to develop training programs for athletes and to help people improve their overall health and fitness.

Typical Job Elements:

- Assess clients' fitness levels and health status
- Design and supervise exercise programs
- Monitor vital signs and heart rate during exercise
- Provide education on proper exercise techniques
- Keep accurate records of client progress



Physical Therapy Overview

Physical therapists help people who have physical disabilities or injuries. They work in hospitals, clinics, and community centers. They assess patients' needs and develop treatment plans to help them improve their mobility and function. They also provide rehabilitation services to help people recover from injuries or illnesses.



Education and Training

Master's Degree Requirements:

- Most graduate-level programs are 2-3 years long
- Some programs may require a pre-professional program
- Most programs require a thesis or capstone project
- Most programs require a minimum GPA of 3.0



How to Become an Athletic Trainer

Education:

The minimum degree requirement to become an athletic trainer is a bachelor's degree in athletic training from a college or university. Some programs may also require a master's degree. In order to obtain a higher degree, you may be required to complete additional coursework and a thesis or capstone project.

Exercise Physiology Projected Job Market

Projected Job Growth:

- The Bureau of Labor Statistics projects a 25% increase in job openings for exercise physiologists from 2014 to 2022.
- The fastest growing occupations in the U.S. are in the health care field.
- The demand for exercise physiologists is expected to increase as the population ages and more people become health conscious.

Physical Therapy Employers

- Private Offices:** Many physical therapists work in private offices, where they provide services to individual patients.
- Clinics:** Physical therapists often work in clinics, where they provide services to a variety of patients.
- Hospitals:** Physical therapists work in hospitals, where they provide services to patients who are recovering from injuries or illnesses.
- Nursing Homes:** Physical therapists work in nursing homes, where they provide services to elderly patients who have physical disabilities.



Job Market and Work Environment

Job Outlook:

The job outlook for athletic trainers is very positive. The Bureau of Labor Statistics projects a 25% increase in job openings for athletic trainers from 2014 to 2022. This is due to the increasing number of people who are participating in sports and fitness activities, as well as the growing awareness of the importance of injury prevention and rehabilitation.

Exercise Physiology Qualifications...

Education: A bachelor's degree in exercise physiology or a related field is required. Some programs may also require a master's degree.

Certifications: The American College of Sports Medicine (ACSM) offers several certifications for exercise physiologists, including the Certified Exercise Physiologist (CEP) and the Certified Personal Trainer (CPT).

Experience: Most employers require at least one year of experience in a related field.

Future Advancements in the Industry

Underwater Treadmill Training

Underwater treadmill training is a new form of exercise that is gaining popularity. It involves walking on a treadmill while submerged in water. This type of training is beneficial for people who have joint pain or injuries, as the water provides a supportive environment that reduces the impact on the joints. It is also a great way to improve cardiovascular fitness and burn calories.

Technology in the Field

What is it?

Technology in the field refers to the use of various tools and equipment to help therapists provide more effective treatment. This includes things like electronic gait analysis, surface electromyography (sEMG), and virtual reality. These technologies allow therapists to collect data on their patients' movements and use that information to develop more personalized treatment plans.

Technology in Athletic Training

Biomechanical Analysis

Why is Technology Important?

Biomechanical analysis is the study of the mechanical aspects of human movement. It involves using various tools and equipment to measure things like force, torque, and power. This information is used to help athletes improve their performance and prevent injuries. For example, a coach might use biomechanical analysis to determine the most efficient way for a runner to stride.

Exercise Physiology...

A MAJOR IMPACTING TECHNOLOGY

DNA Gene-chip Microarray

WHAT DOES THIS TECHNOLOGY MEAN FOR EXERCISE PHYSIOLOGISTS?

- A Microarray is a grid of genes expressed on a chip.
- Many genes expressed at once.
- Connections between genes.
- Self DNA sequencing.

Job Outlook

39%

Employment of physical therapists is expected to increase by 39 percent from 2014 to 2022. This is due to the growing number of people who are aging and becoming more health conscious. Physical therapists are in high demand for their services, and there is a strong need for new graduates to enter the field.

NOW HIRING

