TRINITY COLLEGE FOR WOMEN NAMAKKAL

DEPARTMENT OF NUTRITION & DIETETICS

EVEN SEMESTER

NUTRITION FOR HEALTH AND PHYSICAL FITNESS

Presented by

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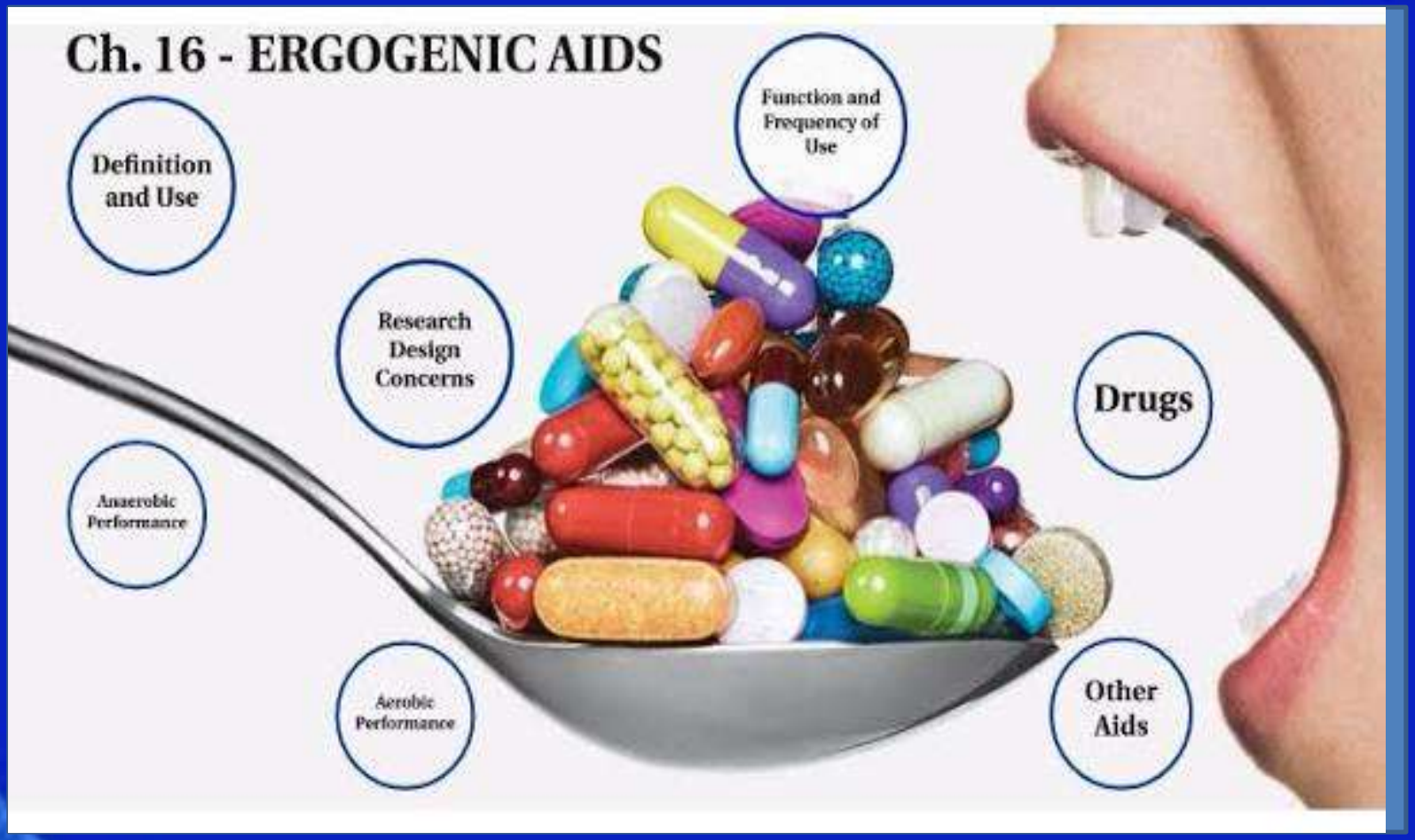
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ERGONIC AIDS

DEFINITION: ERGOGENIC AIDS

- Ergo = work
- Gennan = to produce
- Any substance or method used to enhance performance through increased energy utilization:
  - production
  - control
  - efficiency


Ch. 16 - ERGOGENIC AIDS
Definition and Use
Function and Frequency of Use
Research Design Concerns
Drugs
Anaerobic Performance
Aerobic Performance
Other Aids

INTRODUCTION

Ergogenic aids, defined as substances, devices, or techniques used to enhance athletic performance, play a central role in this quest. These aids are used to increase endurance, strength, and recovery, with the ultimate goal of achieving peak performance during competition or training

Nutritional ergogenic aids

Nutritional ergogenic aids

Nutritional ergogenic aids are substances that improve physical performance by providing the body with specific nutrients. These supplements are often taken to enhance energy, muscle function, endurance, and recovery. Cardio Vascular Diseases (CVDs) encompass a wide range of conditions, including coronary artery disease, heart failure, and arrhythmias. For individuals with CVD, exercise has been proven to enhance heart function, reduce symptoms, and improve long-term survival.

Caffeine

Caffeine is one of the most widely used ergogenic aids due to its well-documented effects on endurance and fatigue reduction. It works by stimulating the central nervous system, which can enhance alertness, decrease the perception of effort, and increase endurance. Caffeine has been shown to improve performance in endurance sports, such as running and cycling, by increasing the body's ability to utilize fat as an energy source, thereby sparing muscle glycogen. Aerobic exercise, such as walking, cycling, or swimming, is particularly effective in improving cardiovascular health. It strengthens the heart, improves circulation, and lowers blood pressure, all of which are crucial for individuals with hypertension or coronary artery disease.

Creatine

Creatine supplementation is popular among athletes who require short bursts of intense energy, such as sprinters, weightlifters, and powerlifters. Creatine increases the availability of Adenosine Triphosphate (ATP), the primary energy source for muscle contractions during high-intensity activities. It enhances strength, power output, and muscle mass. The supplementation of Creatine has been well-researched and proven to be effective in improving performance in activities like sprinting, weightlifting, and team sports.

Protein

Protein is essential for muscle repair and growth. Protein supplementation, particularly post-exercise, can enhance recovery, promote muscle protein synthesis, and increase muscle mass. For athletes engaged in strength training or endurance sports, the timely intake of protein supplements like whey protein can aid in faster recovery and reduce muscle soreness. When prescribing exercise for individuals with cardiovascular diseases, healthcare providers must ensure that the intensity, duration, and frequency are tailored to the individual's current fitness level, health status, and specific cardiovascular risk factors. It is essential to monitor patients for any adverse events, such as chest pain or dizziness, during exercise to avoid complications

THANK YOU

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