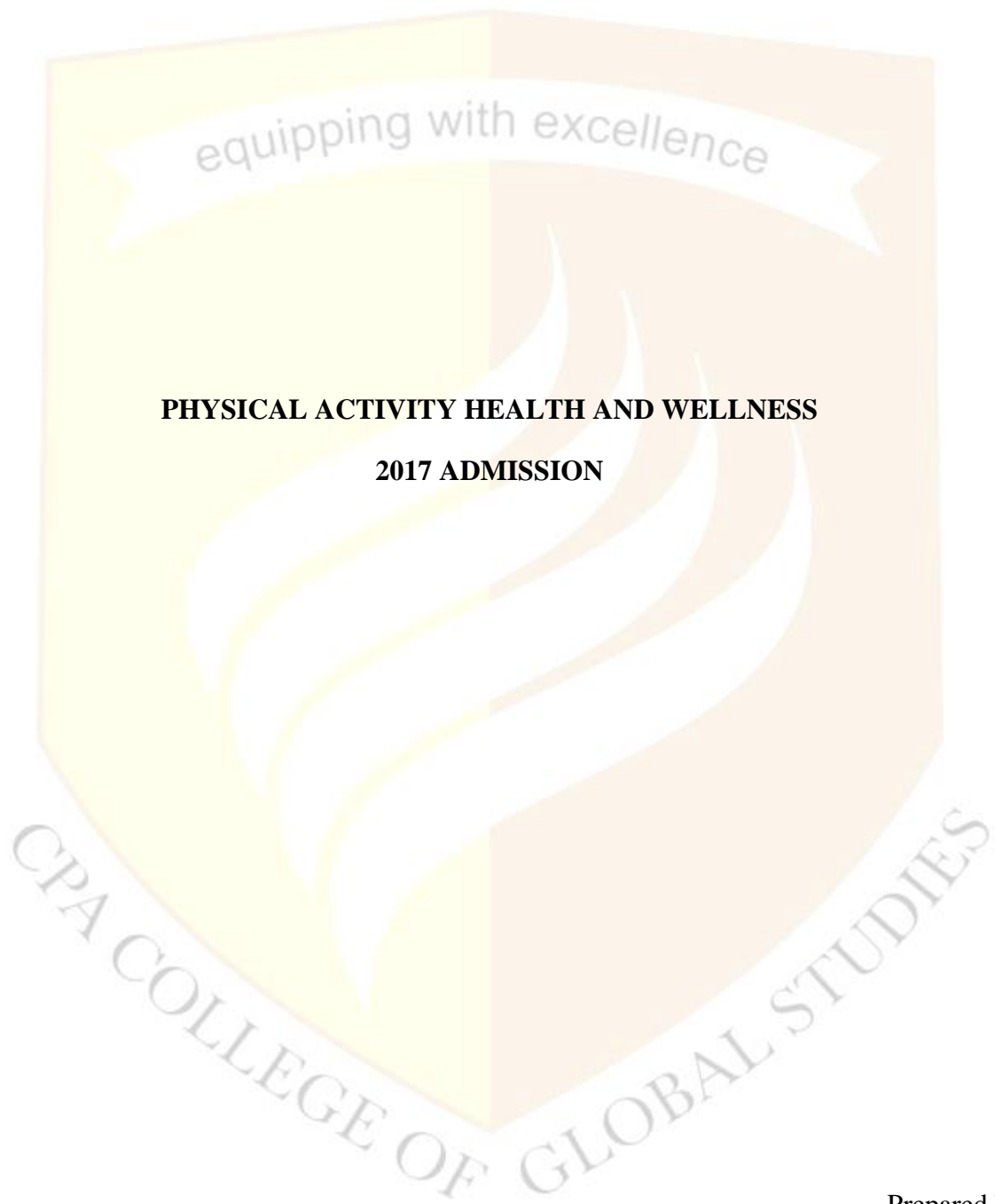


5th sem OPEN COURSE

CALICUT UNIVERSITY



PHYSICAL ACTIVITY HEALTH AND WELLNESS

2017 ADMISSION

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Syllabus

Module 1 Concepts of physical education and fitness

Introduction of physical education: Aim and objective of physical education-Scope and importance of physical education-Physical fitness-Components of physical fitness-Types of physical fitness

Module 2 Exercise principle

First aid and nutrition-Principles of exercise programme-Definition, aim, principles of first aid-Nutrition balance

Module 3: Yoga. Stress management and postural deformities

Definition and meaning of yoga-Types of yoga-Benefits of asanas-Stress management-Postural deformities and corrective measures

Module 4: Vital signs, life style diseases and its management

Blood pressure Diabetes Hypertension - Obesity-Osteoporosis- CHD Back Pain-Fitness management.

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MODULE 1

CONCEPTS OF PHYSICAL EDUCATION AND FITNESS

DEFINITION

Charles A. Bucher

“Physical Education is education through physical activities for the development of total personality of the child and its fulfilment and perfection in body, mind and spirit”

AIM

- To develop human personality in its totality with well planned activity programs
- All round development of human personality of an individual
- To provide skilled leadership, adequate facilities and ample time for the individual

OBJECTIVES AND IMPORTANCE OF PHYSICAL EDUCATION

- To help children move in a skillful and effective manner in all the selected activities in which they engage, in the physical education program, and also in those situation that they will experience during their lifetime.
- To develop an understanding, and appreciation of movement in children and youth so that their lives will become more meaningful propulsive, and productive.
- To develop an understanding and appreciation of certain scientific principles concerned with movement that relate to such factors as time, space, force, and mass-energy relationships.
- To develop through the medium of games and sports better interpersonal relationships.
- To develop the various organic systems of the body so they will respond in a healthful way to the increased demands placed on them

PHYSICAL FITNESS COMPONENTS

- Speed
- Strength
- Endurance
- Flexibility
- Coordinative abilities

TYPES OF PHYSICAL FITNESS

- **Health related physical fitness**
 - 1) Cardio - respiratory fitness
 - 2) Muscular strength
 - 3) Muscular endurance
 - 4) Flexibility
 - 5) Body composition
- **Skill /Performance related physical fitness**
 - 1) Speed
 - 2) Strength
 - 3) Coordinative abilities
 - 4) Power
 - 5) Endurance
 - 6) Agility
- **Cosmetic fitness**

Cosmetic fitness simply means to working out for the purpose of looking fi

MODULE 2

EXERCISE PRINCIPLES, FIRST AID AND NUTRITION

PRINCIPLES OF EXERCISE PROGRAM

- Frequency
- Intensity
- Volume
- Load
- Maintenance and continuity
- Personalized training
- Technical Expertise

EXERCISE AND HEART RATE ZONE

- Resting Heart Rate
- Maximum heart rate
- Target heart rate

DEFINITION OF FIRST AID

First aid is the assistance given to any person suffering a sudden illness or injury, with care provided to preserve life, prevent the condition from worsening, or to promote recovery

AIM OF FIRST AID

- * To preserve life
- * To prevent further injury and deterioration of the condition.
- * To promote faster recovery.
- * To prevent complication

PRINCIPLES OF FIRST AID

- (1). Do first thing first, quickly and quietly without panic.
- (2). Arrange for the safe removal of the casualty to the hospital.
- (3). Reassure the casualty and his relatives sympathetically.
- (4). If there is any failure of breathing, give artificial respiration.
- (5). If there is any failure of circulation, start external cardiac massage.
- (6). If there is severe bleeding, stop bleeding by pressing on the pressure point. Press firmly on the bleeding area with a clean pad for at least a few minutes.
- (7). Avoid handling the casualty unnecessarily.

RICE IN FIRST AID

- Rest
- Ice therapy
- Compression
- Elevation

ABC OF FIRST AID

- A. Airway
- B. Breathing
- C. Circulation

FIRST AID FOR FRACTURE

- * There is heavy bleeding. Even gentle pressure or movement causes pain.
- * The limb or joint appears deformed. The bone has pierced the skin.
- * The extremity of the injured arm or leg, such as a toe or finger, is numb or bluish at the tip.
- * You suspect a bone is broken in the neck, head or back. Don't move the person except if necessary to avoid further injury

FIRST AID FOR BLEEDING

- Stop any bleeding. Apply pressure to the wound with a sterile bandage, a clean cloth or a clean piece of clothing.
- Immobilize the injured area

FIRST AID FOR DROWNING

- Keep checking breathing, pulse and level of response until help arrives

FIRST AID FOR SNAKE BITE

- * Note the time of the bite.
- * Keep calm and still as movement can cause the venom to travel more quickly through the body.
- * Remove constricting clothing or jewelry because the area surrounding the bite will likely swell.
- * Don't allow the victim to walk. Carry or transport them by vehicle.

NUTRITIONAL BALANCE

- Fats
- Proteins

MODULE 3

YOGA, STRESS MANAGEMENT AND POSTURAL DEFORMITIES

DEFINITION AND MEANING OF YOGA

Yoga is a group of physical, mental, and spiritual practices or disciplines which originated in ancient India.

TYPES OF YOGA

1. Bakthi Yoga
2. Karma Yoga
3. Jnana Yoga
4. Hatha yoga
5. Raja yoga (Ashtanga Yoga)

EIGHT LIMBS OF ASHTANGA YOGA

1. Yama
2. Niyama
3. Asana
4. Pranayama
5. Prathyahara
6. Dharana
7. Dhyanam
8. Samadhi

YOGASANAS

1. Vrikshasana
2. Padahasthasana
3. Trikonasana
4. Vajrasana
5. Padmasana
6. Bhujangasana
7. Salabhasana
8. Shavasana

PRANAYAMAS

1. Surya Bedhana Pranayama
2. Chandra Bedhana Pranayama
3. Nadisudhi Pranayama

STRESS MANAGEMENT

A state of mental tension and worry caused by problems in your life, work, etc... something that causes strong feelings of worry or anxiety.

CAUSES OF STRESS

- Jobs
- Workplace
- Financial problems
- Personal Relationship

- Children
- Education
- Sexual Problem
- Busy life

STRESS MANAGEMENT TECHNIQUE

- Exercise
- Getting hobby
- Pets
- Meditation
- Deep breathing
- Reading
- Spas
- Spending time in nature
- Music's

POSTURAL DEFORMITIES AND CORRECTIVE MEASURES

MEANING OF GOOD POSTURE

There is no single best posture for all individual each person must take the body he has and make the best use of it.

POSTURAL DEFORMITIES

1. Kyphosis
2. Lordosis
3. Scoliosis
4. Bow Leg

5. Knock Knee

6. Flat Foot



MODULE 4

VITAL SIGNS, LIFESTYLE/HYPO KINETIC DISEASES AND ITS MANAGEMENT

VITAL SIGNS, PULSE RATE, RESPIRATORY RATE, BLOOD PRESSURE, BODY TEMPERATURE

VITAL SIGNS

Vital signs are a group of the 4 to 6 most important signs that indicate the status of the body's vital (life-sustaining) functions. These measurements are taken to help assess the general physical health of a person, give clues to possible diseases, and show progress toward recovery. The normal ranges for a person's vital signs vary with age, weight, gender, and overall health

PULSE RATE

The pulse is the rate at which the heart beats while pumping blood through the arteries, recorded as beats per minute (bpm). It may also be called "heart rate". The pulse is commonly taken at the wrist (radial artery). Alternative sites include the elbow (brachial artery), the neck (carotid artery), behind the knee (popliteal artery), or in the foot (posterior tibial arteries).

BLOOD PRESSURE

The blood pressure is recorded as two readings: a high systolic pressure, which occurs during the maximal contraction of the heart, and the lower diastolic or resting pressure. A normal blood pressure would be 120 being the systolic over 80, the diastolic.

BODY TEMPERATURE

Body temperature is maintained through a balance of the heat produced by the body and the heat lost from the body

LIFESTYLE/HYPOKINETIC DISEASES

DIABETES MELLITUS

Types of diabetes mellitus.

1. Type 1 DM - "insulin dependent diabetes mellitus" (IDDM)
2. Type 2 DM - "non-insulin dependent diabetes mellitus" (NIDDM)

CAUSES OF DIABETES MELLITUS

- Genetic Factor
- Obesity
- Unhealthy Life Style
- Stress
- Hyper tension
- Smoking
- Over eating
- Lack of Physical Exercise

SYMPTOMS

- Frequent urination
- Blurred vision
- Fatigue
- Nausea
- Frequent infection
- Slow healing wounds
- Excess sweating
- Weight loss

- Breath smells like nail polish

MANAGEMENT

- Life style modification
- Appropriate diet
- Regular physical activity
- Meditation if required
- Maintenance of body weight

HYPERTENSION

CAUSES

- Sedentary lifestyle
- Obesity
- Increased age
- Stress
- Genetic Factor
- Excessive alcohol
- Tobacco
- High cholesterol
- Diabetes
- High intake of salt
- Low calcium& potassium in food

SYMPTOMS

- Muscle cramp
- Weakness
- Frequent urination
- Rapid or irregular heart beat

MANAGEMENT

- Meditation
- Pranayama
- Savasana
- Lose weight
- Sufficient sleep
- Quit smoking
- Healthy diet
- Reduce salt intake
- Cut down alcohol
- Regular physical activity

OBESITY

Obesity is a medical condition in which excess body fat has accumulated to the extent that it may have a negative effect on health. People are generally considered obese when their body mass index (BMI)

CAUSES

- Genetic 40-80% if both the parents are obese
- Food habit
- Increase in the number and size of fat cells in the body.
- Sedentary life style

- Mal function of endocrine glands (pituitary,thyroid)

MANAGEMENT

- Healthy diet
- Surgery
- Medication
- Life style modification
- Appropriate physical activity

OSTEOPOROSIS

Osteoporosis is a disease where increased bone weakness increases the risk of a broken bone.

It is the most common reason for a broken bone among the elderly.

CAUSE

- Sedentary life
- Smoking
- Sex hormones infrequent menstrual cycles and estrogen loss
- Lack of calcium & Vitamin D
- Genetic factor women's are more prone to osteoporosis
- Low body weight
- Body size small, thin bonded women are at greater risk
- Lack of appropriate exercise

MANAGEMENT

- Medication
- Strength training
- Avoid smoking
- Avoid alcohol

- Improve nutrition
- Calcium supplementation
- Consumption of vitamin D
- Hormone replacement therapy

CORONARY HEART DISEASE (CHD)

Coronary heart disease (CHD) is a narrowing of the small blood vessels that supply blood and oxygen to the heart. CHD is also called coronary artery disease

CAUSE

- CHD is caused by the buildup of plaque in the arteries to your heart

SYMPTOMS

- Chest pain or discomfort
- Fatigue
- Shortness of breath
- General weakness

BACK PAIN

Back pain is common with about nine out of ten adults experiencing it at some point in their life, and five out of ten working adults having it every year

CAUSES

- Accident
- Lifting heavy object
- Improper bending
- Over stretching
- Sudden jerk
- Improper warm up

- Bad posture
- Weak back muscle
- Poor fitness level

MANAGEMENT

- Walk 30 minutes daily
- Do core exercise 2-3 times per week
- Apply 15min heat in the morning and 15 min ice in the evening
- Get up from the chair every 30 min

FITNESS ASSESSMENT

1. Cardio respiratory function 12 min run or walk test
2. Cooper test
3. Body composition skin fold test
4. Abdominal muscular test modified sit up
5. Flexibility sit and reach test
6. Muscular strength hand grip strength/ grip dynamo meter test

