Many health and fitness professionals are working with people with individual cardiometabolic risk factors or a clustering of cardiometabolic risk factors known as Metabolic Syndrome. This presents the health and fitness professional with what is often a missed opportunity to develop evidence-based exercise programs for individuals with cardiometabolic disorders that have been medically cleared to exercise independently. Regular physical activity, reducing sedentary behavior, higher levels of cardiorespiratory fitness, and maintaining desirable body weight are factors that have been shown to ameliorate many cardiometabolic health risks and reduce the risk of Metabolic Syndrome. New evidence on the favorable impact muscular strengthening activities may have on cardiometabolic health increases the breadth of tools health and fitness professionals can utilize in working with individuals with Metabolic Syndrome or any of the individual cardiometabolic risk factors defining the syndrome.

I. Welcome and Presentation Objectives

II. Chronic Conditions

Cardiometabolic disorders – Brief description of each
- Obesity
- Prehypertension and Hypertension
- Dyslipidemia
- Impaired fasting glucose/impaired glucose tolerance and diabetes
- Metabolic Syndrome

III. Obesity
- Briefly discuss the progression to obesity and the metabolic health risks along this progression.
- Illustrate to the health and fitness professional how and where along this progression continuum there are a plethora of opportunities to intervene.
- Illustrate the physical activity patterns of underweight, overweight, and obese individuals. Providing the fitness professional with surprising information regarding underweight adults.
- Muscular strengthening activities
- Recommendations and prescriptions

IV. Hypertension
- Briefly discuss the etiology of prehypertension and hypertension
  - 90-95% essential (no known cause) - 5-10% etiology is known
  - The stethoscope speaks…..
Illustrate the JNC VII guidelines and briefly convey important numbers
  - Pre-hypertension - Stage 1 and Stage 2
Muscular strengthening activities
Recommendations and prescriptions

V. Dyslipidemia
- Briefly discuss the progression to dyslipidemia and the health risks along this progression.
- HDL-C – How exercise impacts this important component of dyslipidemia and what the values really mean.
  - <40 mg/dL in men
  - <50 mg/dL in women
- Triglycerides
  - >150 mg/dL
Muscular strengthening activities
Recommendations and prescriptions

VI. Diabetes
- Briefly discuss the progression to diabetes and the metabolic health risks along this progression.
  - Cardiovascular disease
  - Metabolic Syndrome
  - Type 2 Diabetes
- Illustrate to the health and fitness professional how and where along this progression continuum there are a plethora of opportunities to intervene and who are exercise responders and non-responders.
Muscular strengthening activities
Recommendations and prescriptions

VII. Metabolic Syndrome
- Exercise and Metabolic Syndrome - What works?
- What’s up with waist?
Recommendations and prescriptions

VIII. Physical Activity/Exercise
- Leisure time physical activity (LTPA). LTSB?
- Sedentary time? Different than physical inactivity?
- Fitness

IX. Three Tips To Take Away And Implement In Your Job From This Presentation
- Following this presentation the health and fitness professional should have an optimal understanding of today’s most prevalent chronic cardiometabolic health disorders.
- Following this presentation the health and fitness professional should understand and be able to discuss with clients or patients the relationships between cardiometabolic health risks and physical activity, sedentary time, and fitness.
Following this presentation the health and fitness professional should know how to best prescribe physical activity and exercise, including muscular strengthening activities in individuals with cardiometabolic health disorders based on the most recent evidence and recommendations.

X. Selected References


