



METABOLIC SYNDROME

BQIS Fact Sheets provide a general overview on topics important to supporting an individual's health and safety and to improving their quality of life. This document provides general information on the topic and is not intended to replace team assessment, decision-making, or medical advice.

Intended Outcomes

Individuals will understand the basics of metabolic syndrome including risk factors, clinical features, associated problems, and treatment of this syndrome.

Definitions

Metabolic syndrome: A group of metabolic abnormalities that increases the individual's risk of cardiovascular disease and diabetes. Metabolic syndrome is also often called syndrome X or insulin resistance syndrome.

Facts

- The major features of metabolic syndrome are abdominal or stomach obesity, high levels of triglycerides in the blood, low levels of HDL (high-density lipoprotein) cholesterol (good) in the blood, high blood sugar, and high blood pressure.
- Some of the risk factors for development of metabolic syndrome include:
 - Being overweight or obese
 - Sedentary lifestyle (lack of exercise)
 - Aging
 - Diagnosis of diabetes, heart disease, or elevated cholesterol
- Signs and symptoms of metabolic syndrome are:
 - Increased waist size (abdominal obesity)
 - High blood pressure
- Often metabolic syndrome is not associated with symptoms. However, if a physician notes abdominal obesity or high blood pressure, the physician will likely check labs for cholesterol and blood sugar abnormalities.



- Diseases associated with metabolic syndrome include:
 - Heart disease (heart attacks, stroke)
 - Type 2 diabetes
 - Liver disease
 - Obstructive sleep apnea
- Diagnosis of metabolic syndrome is made by taking a medical history, evaluating vital signs including weight, waist circumference, and blood pressure, and lab tests measuring levels of blood sugar and fasting lipids.
- Treatment of metabolic syndrome includes weight reduction through increased exercise and eating an improved diet rich in fruits and vegetables, whole grains, and lean meats. The physician may also prescribe medications to treat elevated cholesterol (statins), blood pressure (angiotensin-converting-enzyme (ACE) inhibitors), and high blood sugar (metformin).
- Second-generation (newer) antipsychotics are more likely to cause metabolic syndrome than first generation (older).

Recommended Actions and Prevention Strategies

1. Be alert to signs and symptoms of metabolic syndrome.
2. Follow the doctor's recommendations for treatment.
3. Take notes as directed for things such as blood pressure, weight, and blood sugar levels.
4. Continue to watch for changes in blood pressure, weight, and blood sugar levels and notify supervisor/nurse if changes are noticed.
5. Provide your notes on blood pressure, weight, and blood sugar levels to the physician.



Learning Assessment

The following questions can be used to verify a person's competency regarding the material contained in this Fact Sheet:

1. Metabolic syndrome is a group of abnormalities that increases an individual's risk of:
 - A. Cancer
 - B. Heart disease
 - C. Anemia
 - D. Cough
2. Major features of metabolic syndrome include:
 - A. Abdominal obesity
 - B. High blood sugar
 - C. High blood pressure
 - D. All of the above
3. Risk factors for metabolic syndrome include:
 - A. Too much exercise
 - B. Lack of exercise
 - C. Low blood sugar
 - D. Low cholesterol
4. Treatment of metabolic syndrome includes:
 - A. Exercise
 - B. Improved diet
 - C. Medications
 - D. All of the above



References

American Heart Association. Metabolic syndrome. Retrieved 07/28/2015 from http://www.heart.org/HEARTORG/Conditions/More/MetabolicSyndrome/Metabolic-Syndrome_UCM_002080_SubHomePage.jsp.

U. S. National Library of Medicine: MedlinePlus. Metabolic syndrome. Retrieved 07/28/2015 from <http://www.nlm.nih.gov/medlineplus/metabolicsyndrome.html>.

U.S. Department of Health & Human Services: National Heart, Lung, and Blood Institute. Metabolic syndrome. Retrieved 07/28/2015 from <http://www.nhlbi.nih.gov/health/health-topics/topics/ms>.

Learning Assessment Answers

1. B
2. D
3. B
4. D