

Endocrinology and metabolic syndrome

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INTRODUCTION

Endocrinology is a branch medicine that deals with the endocrine system, its diseases, and its specific secretions such as hormones. It is also concerned with the integration of developmental events proliferation, growth, and differentiation, and the psychological or Behavioral activities of metabolism, growth and development, tissue function, sleep, digestion, respiration, excretion, mood, stress, lactation, movement, reproduction, and sensory perception caused by hormones. The endocrine system consists of several glands, all in different parts of the body, that secrete hormones directly into the blood rather than into a duct system. Therefore, endocrine glands are regarded as ductless glands.

The “metabolic syndrome” (MetS) is a clustering of components that reflect over nutrition, sedentary lifestyles, and resultant excess adiposity. The MetS includes the clustering of abdominal obesity, insulin resistance, dyslipidemia, and elevated blood pressure and is associated with other comorbidities including the prothrombotic state, proinflammatory state, nonalcoholic fatty liver disease, and reproductive disorders. Because the MetS is a cluster of different conditions, and not a single disease, the development of multiple concurrent definitions has resulted. The prevalence of the MetS is increasing to epidemic proportions not only in the United States and the remainder of the urbanized world but also in developing nations. Most studies show that the MetS is associated with an approximate doubling of cardiovascular disease risk and a 5-fold increased risk for incident type 2 diabetes mellitus. Although it is unclear whether there is a unifying pathophysiological mechanism resulting in the MetS, abdominal adiposity and insulin resistance appear to be central to the MetS and its individual components. Lifestyle modification and weight loss should, therefore, be at the core of treating or preventing the MetS and its components.

Metabolic syndrome is a cluster of conditions that occur together, increasing your risk of heart disease, stroke and type 2 diabetes. These conditions include increased blood pressure, high blood sugar, excess body

fat around the waist, and abnormal cholesterol or triglyceride levels. Having just one of these conditions doesn't mean you have metabolic syndrome. But it does mean you have a greater risk of serious disease. And if you develop more of these conditions, your risk of complications, such as type 2 diabetes and heart disease, rises even higher. Metabolic syndrome is increasingly common, and up to one-third of U.S. adults have it. If you have metabolic syndrome or any of its components, aggressive lifestyle changes can delay or even prevent the development of serious health problems.

EDCs (Endocrine Disrupting Chemicals)

Endocrine disruptors are chemicals that can interfere with endocrine systems at certain doses. These disruptions can cause cancerous tumours, birth defects, and other developmental disorders. Any system in the body controlled by hormones can be derailed by hormone disruptors. Specifically, endocrine disruptors may be associated with the development of learning disabilities, severe attention deficit disorder, cognitive and brain development problems deformations of the body that includes breast cancer, prostate cancer, thyroid and other cancers; sexual development problems such as feminizing of males or masculinizing effects on females, etc.

Pediatric Endocrinology

Pediatric endocrinology is a medical subspecialty dealing with disorders of the endocrine glands, such as variations of physical growth and sexual development in childhood, diabetes and many more. By age, pediatric endocrinologists, depending upon the age range of the patients they treat, care for patients from infancy to late adolescence and young adulthood. The most common disease of the specialty is type 1 diabetes, which usually accounts for at least 50% of a typical clinical practice. The next most common problem is growth disorders, especially those amenable to growth hormone treatment. Pediatric endocrinologists are usually the primary physicians involved in the medical care of infants and children with intersex disorders.

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