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**«DEADLY QUARTET», OR METABOLIC SYNDROME IS
PANDEMIC OF THE XXI CENTURY**

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Serious health problems such as heart disease, stroke and diabetes have long been considered “silent” conditions because they often develop slowly, over a number of years. While there may be no major warning signs until these diseases are already advanced, there is one precursor they all share. It’s called Metabolic Syndrome(MetS).

Metabolic Syndrome is a constellation of risk factors that contribute to the onset of type 2 diabetes mellitus(T2DM) and cardiovascular disease(CVD). Subjects with this disease have three times risk of suffering a heart attack or stroke, twice of dying from such an event, and 4-fold increased risk of dying of atherosclerotic disease compared to people without this disease.

According to the definition of the National Cholesterol Educational Program Adult Treatment Panel III Criteria, MetS has at least 3 of the following 5 conditions: waist circumference (men>40inches,women>35inches),triglycerides(>150mg/Dl), blood pressure(>130/85 mm Hg), high-density lipoprotein cholesterol(men<40mg/Dl, women<50 mg/Dl), fasting blood glucose(>110 mg/Dl).

This Syndrome is detected approximately in one quarter of the adult population aged>25 years and its prevalence varies depending on the definition applied, sex and the ethnicity.

Insulin resistance is a key feature of this disease. That’s why the process of insulin signaling is crucial to the understanding of MetS. The insulin resistance has an intrinsic tyrosine kinase activity. The two major pathways of insulin signaling are the phosphatidylinositol 3-kinase (PI-3 kinase) and the mitogen-activated protein (MAP) kinase. In patients with obesity or T2DM the pathways leading to the activation of PI-3 kinase are blocked.

Strategies for reducing MetS risk in patients are multifactorial. Many specialists place an emphasis on lifestyle changes that increase levels of physical activity, dietary modification, weight reduction and pharmacologic therapy. One novel approach for managing CV risk in patients with Metabolic Syndrome involves the inhibition of the endocannabinoid system, which is believed to play a key role in central and peripheral regulation of energy balance, fat accumulation and lipid metabolism.