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## Metabolic Syndrome

The metabolic syndrome is a constellation of risk factors for the development of cardiovascular disease (CVD). According to the definition issued by the International Diabetes federation (IDF), diabetes or elevated blood glucose, abdominal obesity, elevated cholesterol and high blood pressure figure most prominently. Estimated numbers of sufferers reach up to 20% of the global population. Since these risk factors can be eliminated following medication or lifestyle-changing regimes, an early detection of abnormal laboratory values helps to reduce the risk of developing potentially debilitating or even lethal CVD incidents. Despite the metabolic syndrome not being the only relevant CVD risk factors, it is estimated that the risk for major CVD events is about twice as high as for patients without the syndrome. The IDF recommends checking the waist circumference according to ethnic specific values, and if raised, a more thorough analysis including blood pressure, blood glucose and lipid parameters.

A recent study compared various risk factors (obesity, hyperglycemia, hypertriglyceridemia, HDL-C levels, blood pressure) in adolescent populations in Korea and the US. While the overall prevalence of metabolic syndrome did not differ significantly between these groups, the relative prevalence of individual risk factors did, even up to a factor of 2. Another study detected a prevalence of metabolic syndrome in semi-urban Nigerian communities significantly increased over rural Nigerian communities, and approaching prevalences reported from western regions. This shows that societies starting to adopt western lifestyles must factor traditional local risk factors as well as those prominent in western societies, and tailor prevention and diagnosis programs effectively.

HUMAN offers HumaSens<sup>plus</sup>, a high-quality, precise POCT instrument to measure blood levels of glucose, uric acid and total cholesterol ([REF] 17541). HumaSens<sup>plus</sup> is the optimal tool to monitor risk factors for metabolic syndrome. It is easy to use, reliable and can be used basically at any setting from remote health posts to large hospitals.

**Further reading:**

The IDF consensus worldwide definition of the Metabolic Syndrome, 2006. See: [http://www.idf.org/webdata/docs/IDF\\_Meta\\_def\\_final.pdf](http://www.idf.org/webdata/docs/IDF_Meta_def_final.pdf)

Park et al., J Korean Med Sci 2010; 25: 75-82. Prevalence of Metabolic Syndrome and Obesity in Adolescents Aged 12 to 19 Years: Comparison between the United States and Korea.

Ulasi et al., BMC Health Services Research 2010; 10:71. A community-based study of hypertension and cardio-metabolic syndrome in semi-urban and rural communities in Nigeria