



Robert L. Barbieri, MD
Editor-in-Chief

Let's get serious about the metabolic syndrome

PCOS, preeclampsia, endometrial cancer, and gestational diabetes have something in common, and it's a serious problem

The metabolic syndrome is one of our greatest public-health challenges. The metabolic syndrome is defined as the presence of 3 or more of these 5 factors¹:

Findings from physical examination

1. **Abdominal obesity.** Waist circumference larger than 88 cm (35 inches) in women and 102 cm (40 inches) in men.*
2. **Elevated blood pressure** higher than 130/85 mm Hg or drug treatment for elevated blood pressure.

Findings from laboratory testing

3. **Elevated blood glucose.** Fasting plasma glucose higher than 100 mg/dL or drug treatment for elevated blood glucose.
4. **Elevated triglycerides.** Fasting serum triglyceride 150 mg/dL or higher, or drug treatment for elevated triglycerides.
5. **Low HDL-C.** Fasting serum high-density lipoprotein cholesterol (HDL-C) 50 mg/dL or less for women and 40 mg/dL or less for men, or drug treatment of low HDL-C.

The metabolic syndrome is a constellation of metabolic factors that appear to increase the risk for diabetes mellitus,³ cardiovascular disease,⁴ and all-cause mortality.⁵ Of particular interest, the metabolic syndrome is associated with an increased risk of death from cancer among women, but not among men.⁵

*International investigators propose these ethnic/racial-specific measurements to define abdominal obesity: >80 cm in European, South Asian, Chinese, South American, Sub-Saharan African, and Eastern Mediterranean women, and >90 cm in Japanese women.²

The tip of the metabolic iceberg

It is thought that insulin resistance and endothelial inflammation are inciting physiological factors that cause the metabolic syndrome. Metabolic syndrome is commonly associated with multiple biochemical abnormalities that are not directly assessed to make the diagnosis. In this respect, the metabolic syndrome is the “tip of the metabolic iceberg.”

- For example, women with decreased HDL-C and elevated triglycerides, hallmarks of the metabolic syndrome, are also highly likely to have elevated apolipoprotein B and small low-density lipoprotein particles, which are both strong risk factors for cardiovascular disease.

A spectrum of adverse ObGyn outcomes

Although the metabolic syndrome is most tightly linked with adverse outcomes such as diabetes, cardiovascular disease, and mortality, the metabolic syndrome is also likely to be associated with a spectrum of diseases in obstetrics and gynecology.

- **In obstetrics,** it is likely that the insulin resistance and endothelial inflammation that cause the metabolic syndrome also increase risk for developing gestational diabetes⁶ and preeclampsia,⁷ and that gestational diabetes and preeclampsia are risk factors for later developing the metabolic syndrome⁸ and cardiovascular disease.⁹

FAST TRACK

Metabolic syndrome is linked to:

- Gestational diabetes
- Preeclampsia
- PCOS
- Endometrial cancer

CONTINUED

INSTANT POLL

Are you checking your patients for signs of metabolic syndrome?

Diagnosis of metabolic syndrome requires that we measure waist circumference and blood pressure, and obtain laboratory tests for fasting glucose, triglycerides, and HDL-C

Are you collecting this information for your patients?

☐ Yes

☐ No

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- In gynecology, there is a strong association between the metabolic syndrome and polycystic ovary syndrome¹⁰ and probably an association with endometrial cancer.

More prevalent in African- and Mexican-American women than men

In the Third National Health and Nutrition Examination Survey (NHANES III), the prevalence of metabolic syndrome increased from 7% among participants 20 to 29 years of age to 44% for participants 60 to 69 years of age.¹¹ The age-adjusted prevalence of the metabolic syndrome was nearly equivalent for men (24%) and women (23%). However, the risk of the metabolic syndrome was higher among African-American and Mexican-American women than men.

- African-American women had a 57% higher prevalence of metabolic syndrome than men.
- Mexican-American women had a 26% higher prevalence than men.

What can we do?

Practice recommendations

Once the metabolic syndrome is diagnosed, the initial approach to treatment is lifestyle changes, including reducing caloric and saturated fat intake, increasing the consumption of fruits, vegetables, and whole grains, and increasing exercise. A widely accepted recommendation for reducing the development of diabetes is to try to guide patients to lose 5% to 7% of their body weight in the year after the diagnosis by both reducing calorie intake and increasing exercise to 150 minutes or more per week.^{12,13}

ObGyns can light the way

As obstetrician-gynecologists and women's health-care physicians, we will need to be leaders in stemming the epidemic of metabolic syndrome.



obg@dowdenhealth.com

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