Evaluating Obesity-Related Complications

A comprehensive, actionable diagnosis of overweight or obesity cannot rely on screening for BMI. The identification of obesity-related complications to complete the diagnosis is imperative. These complications are identified through a personal and family history, physical examination, and diagnostic testing.

History and Physical Examination

People with overweight or obesity should receive a comprehensive history and physical examination to identify obesity-related complications.[1] The specific diagnostics and referrals depend on the individual patient's findings. Following is a list of the most common obesity-related complications that may be flagged while doing a history and physical examination.

Prediabetes and Diabetes: Based on family history as well as patient review of systems (ROS).

Hypothyroidism: Based on history, physical examination, and ROS.

Metabolic Syndrome: Based on waist circumference, laboratory evaluation, and blood pressure.

Hypertension: All patients with overweight and obesity should be screened for hypertension.

Gallbladder Disease: Obesity, a diet high in fat and refined carbohydrates, and physical inactivity are risk factors for gallbladder disease. Patients should be assessed by history and symptoms.

Polycystic Ovary Syndrome (PCOS) and Female Infertility: Premenopausal female patients should be assessed for PCOS by history, physical examination, and ROS. Infertility should be assessed with a menstrual and reproductive history and ROS.

Male Hypogonadism: Patients should be assessed by physical examination and ROS.

Asthma/Respiratory Disease: Patients should be assessed based on physical examination and ROS.

Cardiovascular Disease: Patients should be assessed for cardiovascular disease risk and screened for active cardiovascular disease by history, physical examination, and ROS.

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Obstructive Sleep Apnea: Patients should be evaluated based on symptoms, history, and physical evaluation, including neck circumference, daytime sleepiness, snoring, and evidence of apnea episodes provided by a sleeping partner and/or STOP/BANG questionnaire.

Osteoarthritis: Patients should be screened by symptom assessment and physical examination for osteoarthritis of the knee and other weight-bearing joints.

Stress and Urge Urinary Incontinence: Patients should be evaluated for urinary incontinence by physical examination and ROS.

Disability/Immobility: Patients should be assessed for disability or immobility based on physical examination, history, and ROS. The Short Form (36) Health Survey could be used as well.

Gastroesophageal Reflux Disease (GERD): Patients should be evaluated for GERD by physical examination and ROS.

Cancer: Patients should be assessed for cancer, including recurrences. Overweight and obesity is associated with certain cancers. A family history and patient's current screening needs should be identified.

Depression, Anxiety, Binge Eating Disorder, Stigmatization: Patients should be assessed by history, ROS, and appropriate screening tools such as the Patient Health Questionnaire-9 and the Binge Eating Disorder Screener-7.

Diagnostic Testing and Referrals (as appropriate)

Diagnostic studies will also identify obesity-related complications.[1] Tests that may be performed in the evaluation of patients with overweight or obesity include many tests that are often already included in their annual testing. Results may warrant referral to specialists.

Prediabetes and Diabetes: Testing with fasting plasma glucose, glycated hemoglobin (A1C), or 2-hour plasma glucose (2-h PG) value after a 75-g oral glucose tolerance test (OGTT).

Metabolic Syndrome: Fasting glucose, lipid levels (triglycerides, high-density lipoprotein cholesterol).

Hypothyroidism: Thyroid-stimulating hormone (TSH) should be ordered if hypothyroidism is suspected.

Hypertension/CV: Electrocardiogram if patient has hypertension, abnormal rhythm, or point of maximal impulse (PMI) displaced.

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Dyslipidemia: Patients should be evaluated with a lipid panel because dyslipidemia is common with overweight and obesity. The lipid panel includes triglycerides, low-density lipoprotein cholesterol (LDL-C), high-density lipoprotein cholesterol (HDL-C), and non-HDL cholesterol.

Gallbladder Disease: May require ultrasound.

Polycystic Ovary Syndrome (PCOS) and Female Infertility: Infertility may require referral to a specialist.

Male Hypogonadism: If symptoms warrant, serum total testosterone (preferably by mass spectrometry), serum total sex hormone binding globulin (SHBG), and calculated free testosterone.

Asthma/Respiratory Disease: Chest x-ray or spirometry study may be needed.

Cardiovascular Disease: Referral based on findings.

Nonalcoholic Fatty Liver Disease (NAFLD)/ Nonalcoholic Steatohepatitis (NASH): Liver function tests should be evaluated because NAFLD is a common finding with overweight and obesity.

Obstructive Sleep Apnea: Positive screening warrants referral for a sleep study.

Cancer: Screening tests should be up to date (mammogram, PAP, colorectal cancer screening, PSA).

Further testing may be appropriate. Referral to an obesity specialist for consultation may be beneficial. The Obesity Medicine Association algorithm provides guidance on more detailed testing specific to obesity. (See Related Resources.)

Psychological History

Psychological conditions are both a cause and an effect of overweight and obesity and can be triggered or exacerbated by the stigma and bias people with overweight and obesity face.[3,4]

People with obesity experience bias at work, school, and when receiving health care.[3] They earn less and receive fewer promotions than their non-overweight counterparts in comparable positions.[3] People with overweight and obesity also have higher rates of post-traumatic stress disorder and are more likely to have a history of sexual, physical, or verbal abuse.[4]

Unresolved psychological issues can sabotage weight loss. Gently asking questions such as “Did you have a happy childhood?” can reveal such histories.

The care of people who have experienced trauma demands a range of services that are beyond the primary care provider. Patients with significant psychological problems should be referred to a mental health care professional. Patients with an eating disorder should be referred to a counselor with experience in this field.

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References

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4. Pagoto SL, Schneider KL, Bodenios JS, et al. Association of post-traumatic stress disorder and obesity in a nationally representative sample. *Obesity (Silver Spring)*.2012;20:200-205.