

# Obesity/body mass index (BMI)

ICD-10-CM

Clinical overview

## Definitions and background

- **Centers for Disease Control and Prevention (CDC):** Overweight and obesity are labels for ranges of weight that are greater than what is generally considered healthy for a given height. The terms also identify ranges of weight that have been shown to increase the likelihood of certain diseases and other health problems.
- **MedlinePlus** (a service of the U.S. National Library of Medicine and the National Institutes of Health, or NIH): “Obesity means having too much body fat. It is different from being overweight, which means weighing too much. The weight may come from muscle, bone, fat and/or body water. Both terms mean that a person’s weight is greater than what’s considered healthy for his or her height.”
- **The NIH** definition of morbid obesity:
  - Being 100 pounds or more above ideal body weight; or
  - Having a BMI of 40 or greater; or
  - Having a BMI of 35 or greater and one or more comorbid conditions
- **The National Heart, Lung and Blood Institute (NHLBI):** Assessment of an obese patient should include evaluation of BMI, waist circumference and overall medical risk. NHLBI uses the terms “clinically severe obesity” and “extreme obesity” in place of the commonly used term “morbid obesity.”

Adults Ages 20 and older	Body mass index	Obesity class
Underweight	< 18.5	
Normal	18.5 – 24.9	
Overweight	25.0 – 29.9	
Obesity	30.0 – 34.9	1
	35.0 – 39.9	2
Extreme obesity	≥ 40	3

- The preferred obesity metric in research is body fat percentage (BF%) – the ratio of the total weight of a person’s fat to his or her body weight. Accurate measurement of BF% is much more difficult than measurement of BMI; BMI can be used to approximate BF%.

## Body mass index (BMI)

BMI is a mathematical calculation – a person’s weight in kilograms divided by height in meters squared. Although BMI correlates with the amount of body fat, BMI does not directly measure body fat. Thus, some people (athletes, for example) may have a BMI identifying them as overweight even though they do not have excess body fat.

Other methods to measure body fatness include underwater weighing, bioelectrical impedance, dual-energy X-ray absorptiometry and isotope dilution. However, these methods are not always readily available; they can be expensive; they need to be conducted by highly trained personnel; and they can be difficult to standardize across observers or machines, complicating comparisons across studies and time periods.

In general, BMI is an inexpensive and easy-to-perform method of screening for obesity/morbid obesity. Even though a high BMI can be an indicator of high body fatness, calculation of BMI is only a screening tool; it is not diagnostic of the body fatness or health of an individual.

The correlation between BMI and body fatness is fairly strong, but even if two people have the same BMI, their levels of body fatness may differ.

To determine if a high BMI is a health risk for an individual person, a physician would perform further assessments (such as those methods noted above), as well as evaluations of diet, physical activity, personal history including comorbidities, family history and other appropriate health screenings.

**Summary: Physicians use multiple resources and criteria to define and diagnose obesity-related conditions. BMI is a screening tool only. It is not the only criterion used to diagnose obesity/morbid obesity. Diagnosis code assignment is based on the physician’s clinical judgment and corresponding medical record description of the specific obesity condition.**

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## Causes and risk factors for development of obesity

- Physical inactivity
- Unhealthy diet
- Unhealthy eating habits
- Lack of adequate sleep
- Certain medications
- Certain medical conditions
- Genetics and family history
- Older age
- Social and economic issues
- Cultural issues

## Signs and symptoms

- Clothes feeling tight/need for larger clothing
- Increased weight and BMI
- Increased waist circumference

## Diagnostic tools

- Medical history and physical exam
- Calculation of height, weight and BMI
- Measurement of body fat percentage
- Measurement of waist circumference
- Evaluation of comorbid conditions

## Complications and health risks

### Short-term

- Shortness of breath with activity and exertion
- Difficulty sleeping
- Snoring
- Fatigue
- Back and joint pain

### Long-term

- High blood pressure and hypertension
- High cholesterol and triglycerides
- Type 2 diabetes mellitus
- Metabolic syndrome
- Heart disease
- Stroke
- Kidney disease
- Sleep apnea
- Cancer
- Fatty liver disease
- Gallbladder disease
- Osteoarthritis

## Prevention and self-management

- Nutritionally balanced diet
- Healthy eating habits, including portion control
- Regular physical exercise
- Good sleep habits
- Tracking and trending weight, BMI and waist circumference
- Behavior modification
- Support groups
- Realistic goal setting

## Medical treatment

- Medications
- Weight-loss surgery

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Best documentation practices for physicians

## Subjective

- Document the presence or absence of any current symptoms related to obesity, morbid obesity, overweight, etc.

## Objective

- Document the patient's height, weight and BMI. (The medical coder is not allowed to use the patient's documented height and weight to calculate the BMI and assign a corresponding ICD-10-CM code. Rather, the healthcare provider must specifically document the BMI in the medical record.)
- In the physical exam, describe to the highest specificity any current associated observations (such as overweight, obese, morbidly obese, etc.).

## Final assessment/impression

**Specificity:** Document the overweight or obesity diagnosis to the highest level of specificity, as in "morbid obesity," "severe obesity," "extreme obesity," etc.

**Abbreviations:** Limit or avoid altogether the use of abbreviations or acronyms. Spell out each final diagnosis in full.

**Associated conditions:** Document clear linkage between underlying conditions that caused the overweight or obesity condition; and between the BMI and other diagnoses for which the BMI has clinical significance.

**Current versus historical:** Do not describe a current obesity diagnosis as "history of." In diagnosis coding, the phrase "history of" means the condition is historical and no longer exists as a current problem.

## Plan

- Document a clear and concise treatment plan (e.g., referral to nutritionist; patient education related to the obesity condition with information regarding balanced diet; plan for return follow-up; etc.).

## Electronic medical record (EMR) issues

- Some electronic medical records insert ICD-10-CM codes with corresponding descriptions into the assessment section of the office note in place of a provider-stated final diagnosis. For example:  
"E66.8 Other obesity".
- This diagnosis description, by itself, is vague and incomplete. The office note should clearly specify the particular "other" type of obesity, such as "endogenous obesity."

## ICD-10-CM Official Guidelines for Coding and Reporting, Section I.A.9.a – "Other and unspecified codes":

Codes titled "other" or "other specified" are for use when the information in the medical record provides specific detail for which a specific code does not exist.

- Alphabetic Index entries in the coding manual with NEC (not elsewhere classified) in the line designate "other" codes in the Tabular List.
- These Alphabetic Index entries represent specific disease entities for which no specific code exists so the term is included within an "other" code.

In summary, the "Other" ICD-10-CM code with description should not be used, by itself, as a final diagnosis without clear documentation of the actual condition that describes the particular "other" condition.

Another scenario that causes confusion is one in which the assessment section documents a provider-stated diagnosis *PLUS* an EMR-inserted diagnosis code with description that does not match – or may even contradict – the stated diagnosis. Example:

### Assessment: Morbid obesity

**E66.2** Morbid (severe) obesity with alveolar hypoventilation

In this scenario, the provider's final diagnostic statement in bold is "Morbid obesity" with no other specification, which codes to **E66.01**, Morbid (severe) obesity due to excess calories. The EMR-inserted diagnosis code with description is much more specific, but no information was found elsewhere in the record that supports this specificity. This leads to confusion regarding which diagnosis is correct and which code should be reported. To avoid confusion and ensure accurate code assignment, the provider's stated final diagnosis must either

- match the code with description; OR
- it must classify in ICD-10-CM to the EMR-inserted diagnosis code with description.

**Note:** ICD-10-CM is a statistical classification; it is not a substitute for a healthcare provider's final diagnostic statement. It is the provider's responsibility to provide legible, clear, concise and complete documentation of each final diagnosis described to the highest level of specificity, which is then translated to a code for reporting purposes. It is not appropriate for healthcare providers to simply list a code number or select a code number from a list of codes in place of a written final diagnosis.

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Tips and resources for coders

## Coding basics

To help ensure accurate and specific diagnosis code assignment, coders should review the complete office note and the specific description of the overweight or obesity-related condition. Then, in accordance with official ICD-10-CM guidelines and coding conventions:

- Search the alphabetic index entries and all subterms for the specific diagnosis description noted in the medical record.
- Verify the code in the tabular list, carefully following all instructional notes as appropriate.

## Coding obesity

Overweight and obesity classify to subcategory E66:

E66.0- Obesity due to excess calories

E66.01 Morbid (severe) obesity due to excess calories

E66.09 Other obesity due to excess calories

E66.1 Drug-induced obesity

E66.2 Morbid (severe) obesity with alveolar hypoventilation

E66.3 Overweight

E66.8 Other obesity

E66.9 Obesity, unspecified

**Review and follow all applicable instructional notes.**

**Use an additional code to identify BMI if known (Z68).**

Individuals who are overweight, obese, morbidly obese, etc., are at risk for certain medical conditions when compared to persons of normal weight. Therefore, these diagnoses always are clinically significant and reportable when they are documented and supported in the medical record as current conditions.

## Coding BMI – category Z68

Adult BMI codes are used for persons 20 years of age or older and classify as follows:

**Code:** Z68.1 Body mass index [BMI] 19.9 or less, adult

**Subcategories:** (fifth digits required to identify the BMI range within each of these subcategories)

Z68.2- Body mass index [BMI] 20-29.9, adult

Z68.3- Body mass index [BMI] 30-39.9, adult

Z68.4- Body mass index [BMI] 40 or greater, adult

## Clinical significance of BMI

BMI codes are reported only as secondary diagnoses in association with a primary diagnosis for which the BMI has clinical significance and only when the BMI meets the definition of a reportable additional diagnosis (per ICD-10-CM Official Guidelines for Coding and Reporting).

- Principal or first-listed diagnoses are not limited to overweight, underweight or obesity-related conditions.
- A primary diagnosis for which BMI has clinical significance is any primary condition that can be
  - a) Improved if the patient loses weight or lowers his/her BMI; or
  - b) Worsened if the patient gains weight or increases his/her BMI.

Examples include but are not limited to: diabetes mellitus, hypertension, obstructive sleep apnea, hyperlipidemia.

## Additional tips for coding BMI

Code assignment for BMI may be based on medical record documentation from clinicians who are not the patient's provider (i.e., physician or other qualified healthcare practitioner legally accountable for establishing the patient's diagnosis), since this information is typically documented by other clinicians involved in the care of the patient (e.g., a dietitian often documents BMI).

However, the associated primary diagnosis (such as overweight, obesity, diabetes mellitus, etc.) must be documented by the patient's healthcare provider during a face-to-face visit with the patient. If there is conflicting medical record documentation, either from the same clinician or different clinicians, the patient's attending healthcare provider should be queried for clarification.

## Reminder

**Physicians use multiple resources and criteria to define and diagnose obesity-related conditions. BMI is a screening tool only; it is not the only criterion used to diagnose obesity/morbid obesity. Diagnosis code assignment is based on the physician's clinical judgment and corresponding medical record description of the specific obesity condition.**

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Tips and Resources for coders

## Coding examples

Example 1	
Medical Documentation	Record states the patient's height is 5 feet 4 inches and weight is 244 pounds. There is no documentation of BMI.
Final Diagnosis	Severe obesity
ICD-10-CM code	<b>E66.01</b> Morbid (severe) obesity due to excess calories
Comments	<p>Severe obesity classifies to code <b>E66.01</b>.</p> <p>Category <b>E66</b> includes an instructional note advising to use an additional code to identify BMI if known (<b>Z68.-</b>). However, since the BMI is not documented in the medical record, it cannot be coded.</p> <p>The medical coder is not allowed to use the patient's documented height and weight to calculate the BMI and assign a corresponding ICD-10-CM code. Rather, the medical record must specifically document the BMI.</p>

Example 2	
Medical Documentation	Vital signs section of record documents weight 489 pounds, height 65 inches and BMI 81.36.
Final Diagnosis	Obesity
ICD-10-CM code	<b>E66.9</b> Obesity, unspecified <b>Z68.45</b> Body mass index (BMI) 70 or greater, adult
Comments	<p>With no option to query the healthcare provider, code <b>E66.9</b> must be assigned for the final diagnosis stated as simply "obesity."</p> <p>The coder is not allowed to apply a clinical interpretation to the recorded weight and BMI or to change the provider's final impression to "morbid obesity."</p> <p>Code <b>Z68.45</b> for BMI of 81.36 would be assigned as a secondary diagnosis for the primary diagnosis of obesity documented by the provider.</p>

Example 3	
Medical Documentation	Medical record documents a 68-year-old female with a BMI of 35.
Final Diagnosis	Hypertension, uncomplicated diabetes mellitus type 2, morbid obesity
ICD-10-CM code	<b>I10</b> Essential (primary) hypertension <b>E11.9</b> Type 2 diabetes mellitus without complications <b>E66.01</b> Morbid (severe) obesity, due to excess calories <b>Z68.35</b> Body mass index (BMI) 35.0-35.9, adult
Comments	<p>Morbid obesity codes to <b>E66.01</b> Category <b>E66</b> includes an instructional note advising to use an additional code to identify the BMI if known (<b>Z68.-</b>). Therefore, code <b>Z68.35</b> is assigned for the documented BMI of 35.</p> <p>Even though the BMI is 35, it must be noted that BMI is only one diagnostic indicator of morbid obesity. Healthcare providers may use other criteria to arrive at a final diagnosis of morbid obesity.</p> <p>Physicians diagnose morbid obesity based on multiple considerations including, but not limited to, waist measurement, calculation of body fat, muscular structure and medical risks associated with comorbidities.</p>

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Tips and resources for coders

Example 4	
Medical Documentation	Patient presents to the office with complaints of severe right ear pain. Vital signs section of the record documents weight 275 pounds, height 62 inches and BMI of 50.11. After physical exam, the healthcare provider determines the patient's pain is caused by inflammation of the external ear canal.
Final Diagnosis	Otitis externa, right ear
ICD-10-CM code	<b>H60.91</b> Unspecified otitis externa, right ear
Comments	Assign code <b>H60.91</b> only. The BMI should not be coded, since BMI does not have clinical significance for a diagnosis of otitis externa.

Example 5	
Medical Documentation	Body mass index 68.4
Final Diagnosis	Extreme obesity
ICD-10-CM code	<b>E66.01</b> Morbid (severe) obesity, due to excess calories <b>Z68.44</b> Body mass index (BMI) 60.0-69.9, adult
Comments	Extreme obesity is equivalent to severe or morbid obesity.

Example 6	
Medical Documentation	Three-month follow-up for diabetes mellitus and hypertension. Vital signs section: BP 126/70, weight 230 pounds, height 62 inches, body mass index 42.06. Physical exam shows decreased sensation in the lower extremities.
Final Diagnosis	Diabetes Type 2 with diabetic neuropathy Benign essential hypertension, controlled
ICD-10-CM code	<b>E11.40</b> Type 2 diabetes mellitus with diabetic neuropathy, unspecified <b>I10</b> Essential (primary) hypertension <b>Z68.41</b> Body mass index (BMI) 40.0-44.9, adult
Comments	Body mass index is coded since the BMI has clinical significance for diabetes and hypertension. Even though the BMI is more than 40, no obesity or obesity-related diagnosis is documented.

Example 7	
Medical Documentation	Patient presents to the office for a physical exam. Patient reports she is doing well, needs medication refills and has no other complaints. Vital signs include height 54.5 inches, weight 260.8 pounds and BMI 61.96. Physical exam was unremarkable. Provider recommendations: Prescription refills were given to patient. In addition, she was encouraged to lose weight and exercise for at least 30 minutes three times weekly.
Final Diagnosis	Well adult exam
ICD-10-CM code	<b>Z00.00</b> Encounter for general adult medical examination without abnormal findings
Comments	The only diagnosis in the final diagnostic statement is "well adult exam." No specific medical diagnosis is documented.  Body mass index should not be coded, since there is no associated principal medical diagnosis for which the BMI has clinical significance.

**References:** American Hospital Association Coding Clinic; Centers for Disease Control and Prevention; Cleveland Clinic; ICD-10-CM Official Guidelines for Coding and Reporting; Mayo Clinic; MedlinePlus; National Heart, Lung and Blood Institute; National Institute of Diabetes and Digestive and Kidney Diseases; National Institutes of Health