

Early Identification Strategies for **Metabolic Syndrome**

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What is metabolic syndrome?

Group of 5 medical conditions that can raise a patient's chance of getting a heart attack, heart disease, stroke or diabetes. (Having at least 3 will significantly raise risk).

1. Large waistline (How to diagnose obesity)
2. High blood pressure
3. High triglyceride levels.
4. High blood sugar
5. Low HDL cholesterol

Learning objectives

- 1 **Apply** ethnicity-specific anthropometric thresholds when screening for metabolic syndrome, rather than a single BMI cutoff.
- 2 **Interpret** HbA1c, lipid, and blood pressure values in the context of the harmonized criteria — including the situations in which each measure misleads.
- 3 **Identify** medication classes that precipitate or worsen metabolic syndrome, and select lower-risk alternatives where clinically appropriate.
- 4 **Describe** current coverage pathways, including the Medicare GLP-1 Bridge demonstration, that convert an early diagnosis into treatment.

Diagnosing obesity

Anthropometric data:

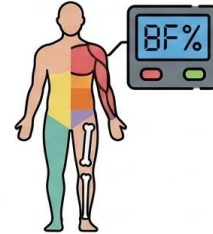
1. Body Mass Index (kg/m^2)
2. Waist Circumference
3. Body Composition



Body Mass Index
(kg/m^2)



Waist
Circumference



Body
Composition

Diagnosing Obesity- Body Mass Index

- **Body Mass Index (kg/m^2)**
- Waist Circumference
- Body Composition

WHO CLASSIFICATION OF WEIGHT STATUS	
WEIGHT STATUS	BODY MASS INDEX (BMI), kg/m^2
Underweight	<18.5
Normal range	$18.5 - 24.9$
Overweight	$25.0 - 29.9$
Obese	≥ 30
Obese class I	$30.0 - 34.9$
Obese class II	$35.0 - 39.9$
Obese class III	≥ 40

BMI cut off for special populations

Could lead to under diagnosis

Ethnic Group	Proposed BMI Cutoffs for Overweight	Proposed BMI Cutoffs for Obesity
Caucasian/African descents	25	30
East Asian/South Asians	23	27.5
Middle East/South East Asians	23	27.5
Hispanics	25	30
Pacific Islanders	25	30

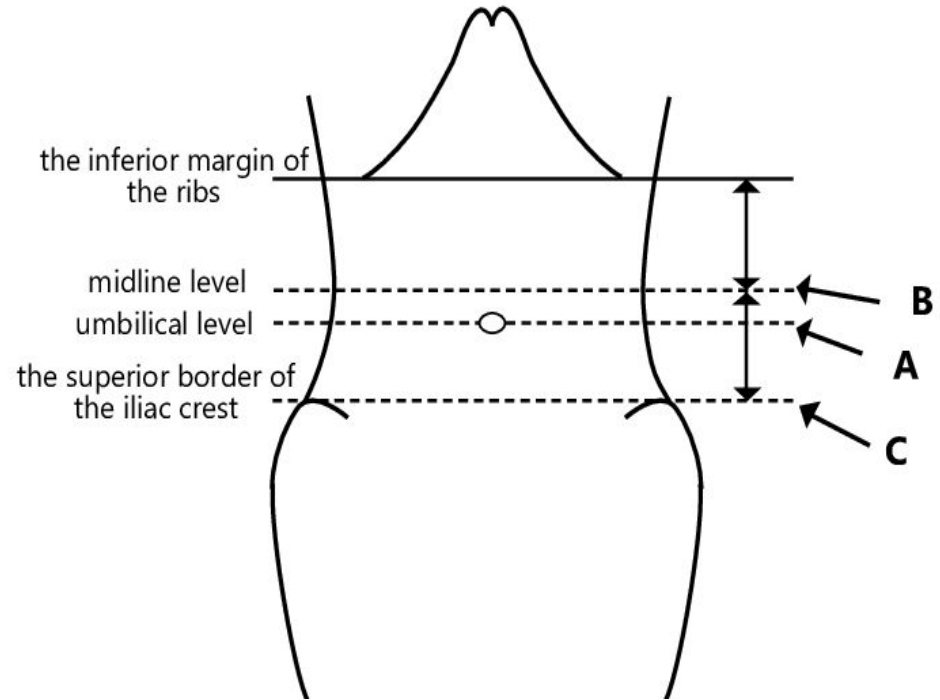
Waist circumference thresholds by population

Population / ancestry	Men	Women	Source
United States (AHA/NHLBI, ATP III)	≥ 102 cm (40 in)	≥ 88 cm (35 in)	AHA/NHLBI
Europid, Middle Eastern, Sub-Saharan African	≥ 94 cm (37 in)	≥ 80 cm (31.5 in)	IDF
South Asian, Chinese, Southeast Asian	≥ 90 cm (35 in)	≥ 80 cm (31.5 in)	IDF
Japanese	≥ 85 cm (33.5 in)	≥ 90 cm (35 in)	Japanese Obesity Society
Ethnic Central and South American	≥ 90 cm (35 in)	≥ 80 cm (31.5 in)	IDF (South Asian data)

Note the Japanese row. The threshold for women is higher than for men — the only such reversal in the table, derived from visceral fat area on CT. It is a useful reminder that these numbers are empirical, not intuitive.

How to measure waist circumference

1. Find the inferior margin of the ribs.
2. Find the superior border of the iliac crest.
3. Measure midway between these points and in line with the belly button.

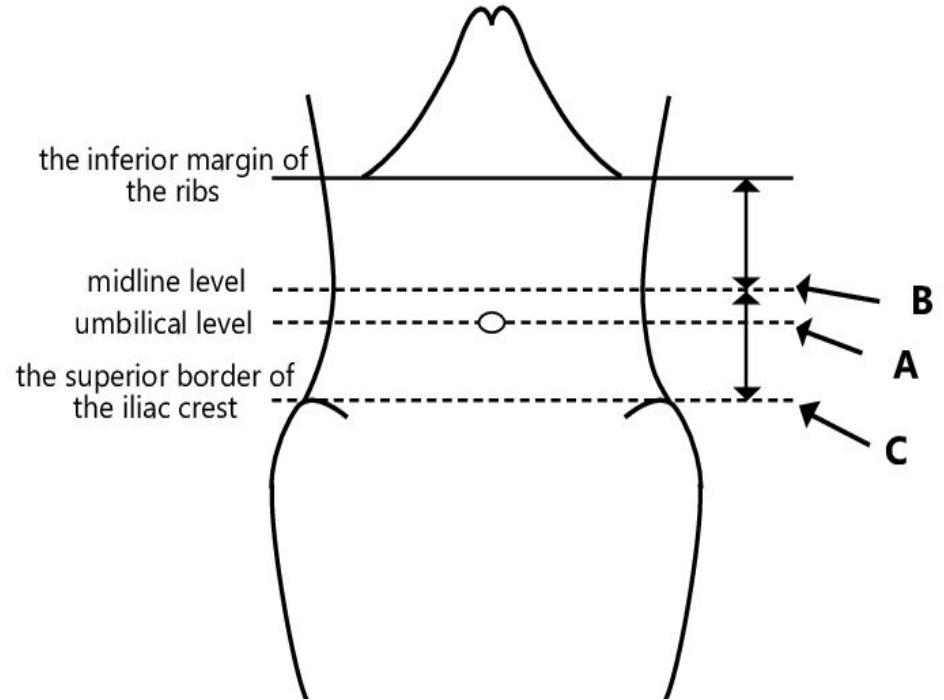


Waist Measurement: Waist to Hip Ratio

WHO Definition Waist-to-Hip Ratio (WHR)

Men: greater than 0.90

Women: greater than 0.85



Body Composition

Common methods includes

1. DEXA
2. Body Pod-Air Displacement Plethysmography (the Bod Pod)
3. Bioelectrical impedance analysis (BIA)



Blood pressure

A five-point gap between two guidelines

Metabolic Syndrome- High blood pressure

Office readings: 140/90 (JNC 8)

Home readings: 135/85 at home

Metabolic Syndrome hypertension criteria is:

130/85 or is patient is undergoing treatment for hypertension.

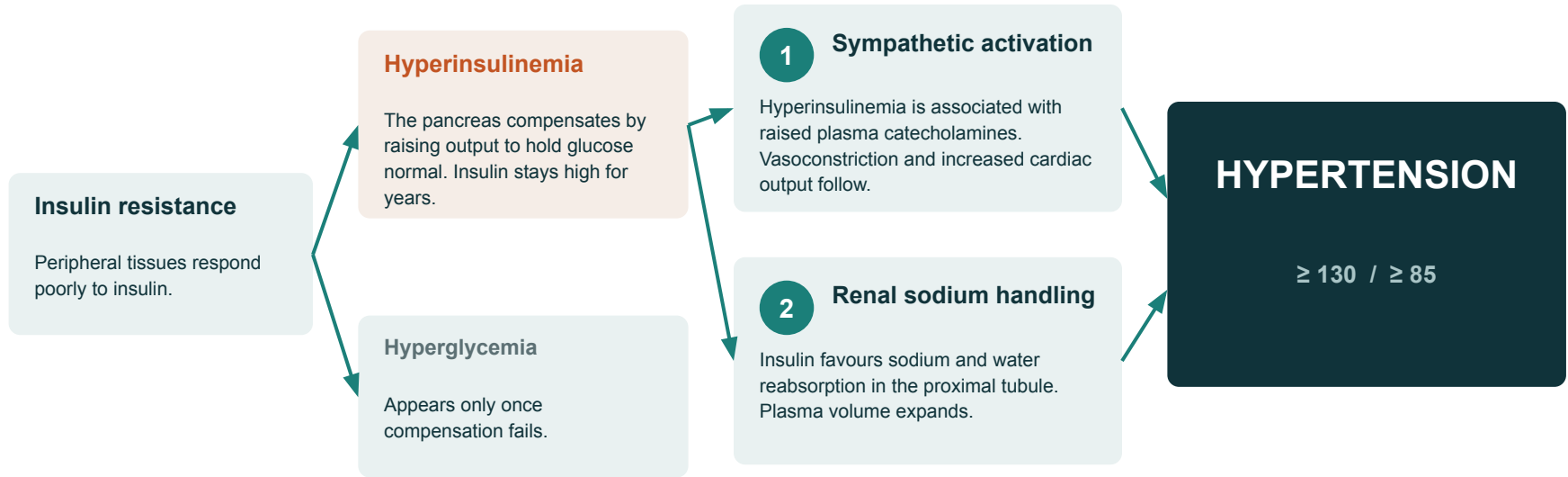
130/85 or 130/80? Both, and they are not the same

	Metabolic syndrome criterion	Hypertension — 2025 AHA/ACC
Systolic	≥ 130 mmHg	≥ 130 mmHg — Stage 1
Diastolic	≥ 85 mmHg	≥ 80 mmHg — Stage 1
Counts if treated?	Yes — antihypertensive therapy satisfies the criterion	Diagnosis persists on treatment

The five-point gap is a real trap. A patient at 132/82 has Stage 1 hypertension by the 2025 guideline but does not meet the metabolic syndrome blood pressure criterion. A patient at 128/86 is the reverse. Neither is an error — they are different instruments answering different questions.

The practical rule: assess both, and record which threshold you applied. Being on an antihypertensive satisfies the metabolic syndrome criterion regardless of the current reading.

How insulin resistance raises blood pressure



Both pathways are driven by insulin itself, not by glucose. Which is why blood pressure can be the first criterion to appear — years before a fasting glucose or an A1c turns abnormal.



Lipids

The criteria, the marker that is missing from them, and a ratio with a blind spot

The lipid criteria — and the one that is absent

Triglycerides

≥ 150

mg/dL (1.7 mmol/L)
or on lipid-lowering treatment

HDL cholesterol

$< 40 / 50$

mg/dL, men / women (1.0 / 1.3 mmol/L)
or on treatment

LDL cholesterol

Not a criterion

A completely normal LDL-C is entirely
compatible with the full syndrome.

Atherogenic dyslipidemia

Insulin resistance produces high triglycerides, low HDL, and a shift toward small dense LDL particles. Cholesterol is redistributed so that a patient can carry a large number of small, highly atherogenic particles at a calculated LDL-C of 95 mg/dL. LDL-C counts cholesterol mass; risk tracks with particle number.

Measure ApoB, in anyone with triglycerides above 150. ApoB ≥ 130 mg/dL is a recognised risk-enhancing factor in the 2018 AHA/ACC cholesterol guideline.

CMDs Staging

TABLE 3.4

The Cardiometabolic Disease Staging System for Prediction of Diabetes in Patients With Overweight or Obesity

Stage	Criteria	Specifications
0	No risk factors	Metabolically healthy obese
1	One or two risk factors	Waist, blood pressure, triglycerides, HDL-c
2	Metabolic syndrome or prediabetes	Only one of the following: metabolic syndrome or IFG or IGT
3	Metabolic syndrome plus prediabetes	Two or more of the following: metabolic syndrome, IFG, IGT
4	T2DM and/or CVD	End-stage cardiometabolic disease

CVD, cardiovascular disease; HDL-c, high-density lipoprotein cholesterol; IFG, impaired fasting glucose; IGT, impaired glucose tolerance; T2DM, type 2 diabetes mellitus.

Adapted from

Guo F, Moellering DR, Garvey WT. The progression of cardiometabolic disease: validation of a new cardiometabolic disease staging system applicable to obesity. *Obesity*. 2014;22:110-118.

TABLE 3.5

ATP III Criteria for Metabolic Syndrome (Must Have at Least Three of These Five Risk Factors)

Risk Factor	Defining Level
1.Waist	≥40 in (102 cm) men ≥35 in (88 cm) women
2.Triglycerides	≥150 mg/dL (1.7 mmol/L)
3.HDL-c	<40 mg/dL (1.03 mmol/L) men <50 mg/dL (1.29 mmol/L) women
4.Blood pressure	≥130/≥85 mm Hg
5.Fasting glucose	≥100 mg/dL (5.6 mmol/L)

ATP III, Adult Treatment Panel III; HDL-c, high-density lipoprotein cholesterol.



Iatrogenic metabolic syndrome

The medication list as a screening instrument

Medication promoting weight gain

Every drug on this list is one you can do something about.

Drug-induced metabolic effects are the most modifiable cause of metabolic syndrome — and the one most often documented in the chart and then ignored. "It's the medication" is a diagnosis, not an excuse.

Weight gain

Antipsychotics, mirtazapine, valproate, gabapentinoids, insulin, sulfonylureas, glucocorticoids, depot progestins

Impaired glucose

Glucocorticoids, thiazides, non-vasodilating beta blockers, tacrolimus, statins (small), antipsychotics, androgen deprivation

Dyslipidemia

Thiazides, beta blockers, older protease inhibitors, sirolimus, isotretinoin, tamoxifen, glucocorticoids

Blood pressure

NSAIDs, decongestants, oral contraceptives, calcineurin inhibitors, glucocorticoids, venlafaxine, stimulants



RISK OF METABOLIC SYNDROME



LOW

**Aripiprazole,
Ziprasidone,
Amisulpride,
Lurasidone,
Brexpiprazole,
Asenapine,
Olanzapine-
Samidorphan,
Lumateperone,
Cariprazine,
most first-generation
antipsychotics**



INTERMEDIATE

**Quetiapine,
Sertindole,
Iloperidone,
Zotepine**



HIGH

**Clozapine,
Olanzapine,
Risperidone**



Beyond psychotropics

Class	Agents	Predominant metabolic effect
Glucocorticoids	Any systemic route; high-dose inhaled or repeated intra-articular	Insulin resistance, central adiposity, hypertension, dyslipidemia
Antihypertensives	Thiazides; atenolol, metoprolol, propranolol	↑ glucose, ↑ TG, ↓ HDL, weight gain
Antiretrovirals	Older PIs and thymidine analogues; INSTIs with TAF	Lipodystrophy (older agents); weight gain (newer regimens)
Immunosuppressants	Tacrolimus > cyclosporine; sirolimus	Post-transplant diabetes; sirolimus → marked dyslipidemia
Endocrine / oncology	Androgen deprivation therapy; tamoxifen	↑ fat mass and insulin resistance; hepatic steatosis, ↑ TG
Contraception	Depot medroxyprogesterone acetate	Weight gain, modest metabolic effects
Diabetes agents	Insulin, sulfonylureas, thiazolidinediones	Weight gain — at odds with the metabolic goal

One drug not to deprescribe: statins carry a small increase in new-onset diabetes — roughly 9% relative risk in meta-analysis — and the cardiovascular benefit substantially outweighs it. Counsel, monitor, continue.

Metabolically informed alternatives

Instead of	Consider	Caveat
Olanzapine, clozapine	Aripiprazole, lurasidone, ziprasidone; if clozapine is required, adjunctive metformin	Efficacy is not interchangeable — decide jointly with psychiatry
Paroxetine, mirtazapine, TCAs	Sertraline; bupropion, which is weight-favourable	Bupropion lowers seizure threshold; avoid in eating disorders
Valproate	Lamotrigine, where the indication permits	Not equivalent across all indications
Gabapentin, pregabalin	Duloxetine; topiramate, which is weight-negative	Topiramate is teratogenic and cognitively active
Thiazide plus atenolol	ACE inhibitor or ARB; dihydropyridine CCB; carvedilol or nebivolol if beta blockade is needed	Post-MI and heart failure indications take precedence
Depot medroxyprogesterone	Levonorgestrel IUD, etonogestrel implant, combined OC	Patient preference and contraindications govern
Chronic oral prednisone	Lowest effective dose; steroid-sparing agent; taper plan with a date	Never taper without the managing specialist

Illustrative, not exhaustive. Every substitution requires an individual risk–benefit assessment and, where another clinician is prescribing, their involvement.

Where an early diagnosis becomes a treatment pathway

Every route into this program runs through a metabolic syndrome component.

Eligibility is a BMI threshold plus a metabolic or vascular diagnosis — prediabetes, uncontrolled hypertension, chronic kidney disease, prior myocardial infarction or stroke. Finding those components early is what makes a patient eligible. Detection and access are the same conversation.

What it is

A time-limited CMS demonstration that operates outside the Part D benefit.

Part D plans carry no risk and do not have to opt in.

How long it runs

1 July 2026 through 31 December 2027.

Extended from the original December 2026 end date. The Part D portion of the BALANCE Model is delayed indefinitely.

What the patient pays

\$50 per 30-day supply — and that is the total out-of-pocket cost.

No deductible applies, nothing counts toward TrOOP, and there is no low-income subsidy.

Three routes in

BMI $\geq$ 35

No additional diagnosis required.

BMI $\geq$ 30 plus one of

Heart failure with preserved ejection fraction

Uncontrolled hypertension — systolic above 140 or diastolic above 90 despite two antihypertensives

Chronic kidney disease stage 3a or above

BMI $\geq$ 27 plus one of

Prediabetes, by ADA criteria

Previous myocardial infarction

Previous stroke

Symptomatic peripheral artery disease

All three routes also require age 18 or over and enrollment in a standalone PDP or an MA-PD coordinated care plan.

These three diagnoses make a patient ineligible — because Part D already covers them.

Type 2 diabetes, moderate to severe obstructive sleep apnea, and noncirrhotic MASH with F2–F3 fibrosis are Part D covered indications. A patient with any of them goes through their Part D plan rather than the Bridge, even if every criterion above is met. One further trap: BMI is assessed at the time GLP-1 therapy was initiated, not at the time of the prior authorization request.

Real Life Practice

Prescription first, not prior authorization

Send the prescription to the pharmacy and wait for the pharmacy to request the authorization.

Submitting the request first returns a “patient not found” error.

Criteria are met at initiation

Attest to the BMI at the time therapy began, not today's.

A patient who started at 37 and now measures 34 still qualifies.

Intent decides the route

If the drug is prescribed in order to reduce major adverse cardiovascular events, it goes to Part D.

That holds even when weight reduction is also a goal.

No appeal — only resubmission

There is no appeals process under the demonstration.

A denial based on incorrect or incomplete information can be corrected by resubmitting the form.

Eligible drugs are Foundayo, Wegovy (injection and tablets), and the Zepbound KwikPen only. Prescriber call centre 855-273-0102, Monday to Friday.

Thank you!

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