

The Expert Consensus on Clinical Issues Related to Insulin Resistance (2022 Edition) published by the Chinese Diabetes Society encompasses systematic recommendations on lifestyle interventions and pharmacotherapy, serving as a clinical reference and patient education resource.

Key Points of Core Content

Lifestyle Interventions form the foundation and should be sustained throughout management. Recommendations include:

- A daily caloric reduction of $\geq 12\%$, with 20%–30% reduction for overweight/obese individuals to achieve $\geq 5\%$ weight loss;
- Increasing dietary fiber to 35 g/day or supplementing with 15 g/day;
- Engaging in ≥ 150 minutes of moderate-intensity aerobic exercise weekly combined with resistance training.

Pharmacotherapy guidelines:

- For individuals with comorbid type 2 diabetes mellitus (T2DM), metformin is the first-line choice. If target goals are unmet, combination therapy with thiazolidinediones (TZD) or peroxisome proliferator-activated receptor (PPAR) pan-agonists is recommended.
- For those with comorbid atherosclerotic cardiovascular disease (ASCVD) or at high risk, add GLP-1 receptor agonists (GLP-1RA) or sodium-glucose cotransporter 2 inhibitors (SGLT2i) with proven cardiovascular benefits.
- For patients with polycystic ovary syndrome (PCOS), consider metformin, TZD, or PPAR pan-agonists.
- In obese patients unresponsive to lifestyle interventions, weight-loss medications or bariatric surgery may be indicated.

For online access, please visit the link:

<https://rs.yiigle.com/CN115791202212/1435784.htm>

The 2025 Standards of Medical Care in Diabetes published by the American Diabetes Association (ADA) comprehensively address the integrated management of insulin resistance, with particular emphasis on:

Lifestyle Interventions

For individuals with prediabetes, the guidelines recommend a calorie-restricted diet (500–750 kcal/day reduction) and ≥ 150 minutes/week of moderate-intensity aerobic exercise to achieve at least 7% weight loss. A new recommendation on sleep health highlights the association between insufficient sleep (<6 hours/day) and increased risk of insulin resistance.

Pharmacotherapy

- Prediabetes prevention: Metformin is the first-line choice for high-risk individuals (e.g., BMI ≥ 35 kg/m², fasting plasma glucose ≥ 110 mg/dL).
- Comorbid chronic kidney disease or heart failure: In T2DM patients, GLP-1RAs or SGLT2is are preferred to reduce cardiovascular events and renal progression risk, independent of glycemic control targets.
- Metabolic dysfunction–associated steatotic liver disease (MASLD) with liver fibrosis: Consider thyroid hormone receptor- β agonists in combination with lifestyle interventions to improve hepatic insulin sensitivity.

For online access, please visit the link:

https://diabetesjournals.org/care/article/48/Supplement_1/S14/157553

The consensus of the American Association of Clinical Endocrinologists (AACE) identifies insulin resistance as a core feature of prediabetes (Stage 1 of the DBCD model), recommending:

Lifestyle Interventions

Weight loss targets of >5% to >15% of baseline body weight, combined with resistance training (e.g., 2–3 sessions/week of strength training) to increase muscle mass and insulin sensitivity.

Pharmacotherapy

- Metformin is preferred for prediabetic patients, with lifestyle intervention reversing approximately 30% of cases.
- For T2DM patients with comorbid ASCVD or high-risk factors, GLP-1 receptor agonists (GLP-1RAs) or SGLT2 inhibitors are recommended independent of glycemic control targets.
- In obese patients, consider GIP/GLP-1 dual agonists (e.g., Tirzepatide) to enhance weight loss efficacy.

Guidelines Related to Metabolic Syndrome and Insulin Resistance:

AACE's Dyslipidemia Management Guidelines (2025 Edition) emphasize the association between insulin resistance and atherosclerosis, recommending lifestyle modifications (e.g., increasing dietary fiber to 25–30 g/day) and LDL-C control (target <70 mg/dL) to reduce cardiovascular risk.

For online access, please visit the link:

<https://pro.aace.com/clinical-guidance/aace-consensus-statement-algorithm-management-adults-dyslipidemia-2025-update>