# THE KEY CONNECTION

Declining estrogen during menopause significantly increases your risk of insulin resistance—the first step toward type 2 diabetes. Estrogen helps muscles use glucose for fuel and regulates liver glucose production. Without it, we become vulnerable to high blood sugar and insulin resistance—independent of age.

Good news: Insulin resistance is reversible at this stage through lifestyle changes.

#### ARE YOU AT RISK?

✓ Age 45+ or early menopause √ Family history of diabetes √ Abdominal obesity (waist >80cm) ✓ Physically inactive √ High blood pressure/cholesterol

✓ PCOS, sleep apnoea, fatty liver

### Get tested:

Ask your GP for: fasting glucose, HbA1c, fasting insulin, and HOMA-IR score. Standard blood tests can miss early insulin resistance.

#### I. NUTRITION EAT MORE:

Low GI foods: Vegetables, berries, wholegrains (brown rice, oats), nuts, beans, lean protein

Fibre: 25-40g daily (beans, broccoli, berries, avocado, chia seeds) Protein + fibre at every meal to prevent blood sugar spikes EAT LESS:

# White bread, pasta, rice

Sugary drinks, fruit juices, alcohol Processed foods, cakes, biscuits

# SMART HABITS:

Start day with protein (eggs, Greek yoghurt) not Walk after meals to lower glucose Add nuts to fruit, egg to avocado toast Drink water, not soft drinks

# EXERCISE (Non-Negotiable!)

# RESISTANCE TRAINING 2-3x/week MOST IMPORTANT!

Builds muscle = better insulin sensitivity even at rest Every 10% increase in muscle = 11% reduced insulin resistance risk Use dumbbells, bands, body weight or gym equipment Start with 10-15 minutes and build up Don't worry—you won't "bulk up"

AEROBIC EXERCISE: 30 minutes daily (walking is perfect!) Research shows: Just 30-60 minutes of strength training per week = 10-20% lower risk of death from all causes.

## LIFESTYLE ESSENTIALS

Maintain healthy weight (waist <80cm) Sleep 7-9 hours (sleep deprivation → sugar cravings → insulin resistance) Estrogen therapy shows protective effect against Manage stress (high cortisol worsens insulin resistance) Post-meal walks (even 10 minutes helps)

### HORMONE THERAPY

MHT may reduce type 2 diabetes risk by 20% insulin resistance Should always be combined with lifestyle strategies Consider transdermal forms (patches/gels)

# WHY THIS MATTERS

Untreated insulin resistance leads to: Prediabetes → Type 2 diabetes Heart disease, stroke Alzheimer's disease ("Type 3 diabetes") Kidney and eye disease But at the insulin resistance stage—it's reversible!

THE BOTTOM LINE Muscle is your metabolic ally. The more muscle you have, the better your insulin sensitivity. Combined with smart nutrition and hormone support, you have powerful tools to protect your metabolic health for decades to come.

Key Resources: The New Menopause (Dr Mary Claire Haver) • The Perimenopause Solution (Dr Shahzadi Harper) • Australasian Menopause Society

This guide is for educational purposes and does not replace professional medical advice. Always consult your healthcare provider for personalised guidance. Created by Menopause Mentor | Compiled from peer-reviewed research, clinical guidelines & expert recommendations