



INSTITUTE OF ADVANCED ORTHOPEDICS

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Guidelines for Safe Physical Activity in Adults Aged 40–60 Years

1. Why This Matters

Sudden cardiac events during or after exercise have become increasingly common in adults between 40 and 60 years. Most such incidents are preventable with timely cardiac evaluation and adherence to safe exercise practices. The goal is not to discourage activity but to make it safe and sustainable.

2. Annual Cardiac Evaluation

A yearly cardiac check-up is strongly advised for all individuals planning moderate to high physical exertion such as running, football, badminton, or gym workouts.

Recommended Screening Tests

1. **Clinical evaluation:**
 - Personal and family history of cardiac disease, hypertension, diabetes, cholesterol, or smoking.
 - Blood pressure and BMI measurement.
2. **ECG and Treadmill Test (TMT):**
 - A **treadmill stress test** can detect minor variations in blood flow to the cardiac muscle.
 - A **negative TMT** indicates good cardiac functional reserve.
3. **Echocardiogram (Echo):**
 - Checks heart muscle strength, valve function, and chamber dimensions.
 - Especially useful if there is a family history of cardiomyopathy or unexplained fatigue.
4. **CT Coronary Calcium Score (CAC):**
 - If the treadmill test or risk profile is borderline, a **calcium score** helps identify early plaque buildup.
 - A **score of 0** and a **negative treadmill test** at 45 years significantly reduces the likelihood of a cardiac event.
5. **CT Coronary Angiogram or Invasive Angiogram:**
 - If the treadmill or calcium score is abnormal, proceed to a **CT angiogram** or **fluoroscopic angiogram** to detect vessel blockages.

3. Exercise Safety and Preparation

Before Exercise

- **Warm up properly:** 5–10 minutes of light activity and stretching improves circulation.
- **Hydrate well:** Dehydration increases blood viscosity and strain on the heart.
- **Avoid sudden exertion:** Never jump from a sedentary lifestyle to high-intensity workouts.

During Exercise

- Maintain a **steady heart rate zone** (preferably 60–80% of predicted maximum).
- Watch for warning signs—**chest pain, unusual breathlessness, dizziness, or palpitations**—and stop immediately if they appear.

After Exercise

- **Cool down:** Gentle stretching or walking for 5–10 minutes.
 - **Hydration and nutrition:** Replace fluids and electrolytes.
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4. Long-Term Preventive Strategy

- **Aerobic exercise:** At least 150 minutes/week of moderate-intensity (brisk walking, cycling, swimming).
 - **Muscle strengthening:** 2–3 sessions/week to maintain muscle tone and improve peripheral circulation.
 - **Regular sleep and stress control:** Poor recovery or psychological stress can raise cardiac risk.
 - **Routine monitoring:** Lipid profile, fasting glucose, and blood pressure checks annually.
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5. Key Takeaway

A **negative treadmill test** and **zero calcium score** around age 45 offer strong reassurance against major cardiac risks for 5–7 years.

But lifestyle control, hydration, and regular warm-ups remain essential for ongoing safety.

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