

THE MEDICAL PRACTICE AT 48 WIMPOLE STREET

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Practice Guidelines for Stress Testing

Clinical Indications

1. Diagnosis of coronary ischaemia – anginal pains or exertional SOB
2. Assessment of known coronary disease to assess medical control
3. 6 weeks post MI

Screening Indications

1. Executive medicals for Land Securities, Publicis, Bechtel, Thomson, TUI, City and Guilds
2. RAC Medicals – exercise to exhaustion and monitor for 5 minutes after stopping

Contraindications

1. Digoxin therapy - stop 1 week and BBLOCKERS 24 hours before testing if possible
2. Aortic stenosis
3. Other severe valve stenosis
4. Hypertrophic Cardiomyopathy
5. Severe Heart Failure
6. Unstable angina
7. Uncontrolled hypertension >220/120
8. Unstable cardiac rhythm (AF is OK off digoxin if rate <120)
9. Myocarditis or pericarditis
10. Intercurrent illness/pneumonia
11. Limiting arthritis/COAD/claudeication
12. ECG exclusions-LBBB, LVH with ST changes, WPW, unexpected acute MI/ischaemia

Reasons to Stop the Test

1. ST depression >3 mm
2. ST elevation >1 mm
3. Cardiac arrhythmias incl VT, SVT, AF, and new BBB, heart block, cardiac arrest
4. Patient symptoms and signs such as chest pain, fatigue, dizziness, dyspnoea, ataxia
5. Fall in systolic BP >20 mmHg
6. Rise in BP systolic >300 mmHg, diastolic >130 mmHg

Protocol

Standard BRUCE on treadmill – aim for 85% of maximum heart rate (220-age in years). Full Bruce takes 21 minutes over 7 stages. Reaching 100% of heart rate is a good prognostic sign. RAC aim is to exercise to exhaustion.

	Time(mins)	Incline(%)	Speed(km/hr)	BP
Stage 1	3	10	2.7	
Stage 2	6	12	4	
Stage 3	9	14	5.4	
Stage 4	12	16	6.7	
End	Immediate			
	+1			
	+3			

Interpretation of Results

Positive result if exercise induced angina symptoms or downsloping ST depression ≥ 2 mm

1. NEGATIVE – max sensitivity of test is 78% so beware of false negatives, coronary ischaemia reasonably excluded
2. NEGATIVE SUBMAXIMAL – highly unreliable for exclusion of ischaemia
3. EQUIVOCAL – unreliable result

Reconsider symptoms and overall likelihood of CAD and refer cardiologist if clinical suspicion remains.

4. POSITIVE – specificity of test 70% so positive test usually denotes ischaemia except in young men and women under 40

Rx with aspirin and refer all positive results to a cardiologist for angiography– private consultant appointments usually available within 48 hours and urgent cases seen stat at St Marys.

Lead Groups

II,III,aVF = inferior
I,aVL = high lateral
V1,V2,V3 = anteroseptal
V4,V5,V6 = anterolateral

References

BMJ 2002 4 May (Clinical Review) ABC of Clinical Electrocardiography: Exercise Tolerance Testing. Hill & Timmis.