

# THE MEDICAL PRACTICE AT 48 WIMPOLE STREET

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## PRACTICE GUIDELINES FOR STRESS TESTING

### Obtain informed consent

### Clinical Indications

1. Diagnosis of coronary ischaemia – anginal pains or exertional SOB
2. Assessment of known coronary disease to assess medical control
3. Follow up after MI or angioplasty/bypass to evaluate progress and functional capacity

### Screening Indications

1. Executive medicals for
2. RAC Licence Medicals – exercise to exhaustion and monitor for 5 minutes after stopping

### Contraindications

1. Digoxin therapy - stop 1 week and BB blockers 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. ECG exclusions-advanced AV block, WPW, unexpected acute MI/ischaemia

### Protocol

Standard BRUCE on treadmill – aim for 90% of maximum heart rate ( $210 - (0.65 \times \text{age})$ ). Full Bruce takes 21 minutes over 7 stages. Reaching 100% of heart rate is a good prognostic sign. RAC requires 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			

### Reasons to Stop the Test

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

## Interpretation of Results

Positive result if exercise induced angina symptoms or downsloping ST depression  $\geq 2$  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 urgently – private consultant appointments usually available within 24 hours and urgent cases seen stat at St Mary's.

### 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.