


In Aortopathy Patients is Exercise Beneficial or Harmful?

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Disclosures:

None


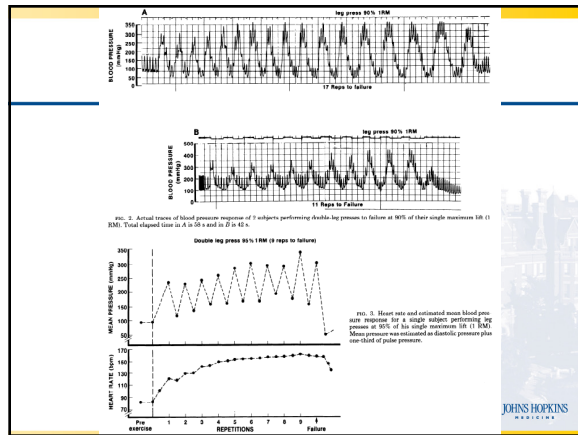


Exercise Induced Hypertension

Table 3. Sex-Specific Percentiles for BP Values (mm Hg) From Treadmill Exercise Tests Obtained From FRIEND Cohort

Age Group, y	5th		10th		25th		50th		75th		90th		95th	
	SBP	DBP	SBP	DBP	SBP	DBP	SBP	DBP	SBP	DBP	SBP	DBP	SBP	DBP
Men														
20-29	147	58	150	62	160	70	176	80	187	84	202	90	212	96
30-39	147	60	154	64	168	70	178	80	190	88	206	96	214	100
40-49	150	65	158	70	169	76	182	82	198	90	212	98	224	100
50-59	154	68	162	70	178	78	190	84	206	92	220	98	234	105
60-69	152	64	162	70	172	76	190	82	206	94	220	100	238	110
70-79	146	66	156	66	168	71	190	80	210	86	224	96	240	100
Women														
20-29	132	58	136	62	144	68	154	74	165	80	175	88	180	90
30-39	130	62	138	66	148	70	160	78	170	84	182	92	194	96
40-49	134	64	140	68	152	72	166	80	180	86	196	94	208	98
50-59	138	64	144	70	156	74	172	80	190	90	204	96	216	100
60-69	144	58	150	64	166	74	184	83	204	91	224	100	235	110
70-79	128	60	144	64	165	72	203	90	216	102	231	110	234	112

BP indicates blood pressure; DBP, diastolic BP; FRIEND, Fitness Registry and the Importance of Exercise: A National Database; and SBP, systolic BP.





Arterial blood pressure response to heavy resistance exercise

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- Valsalva maneuver added 40-50mmHg during repetitions.
- Remarkable elevations for smaller exercises seen also.
- Occlusion of intramuscular vessels during contraction.
 - Estimated pressures 570-1025mmHg intramuscularly.
 - Peak EtCO₂: 20-30 seconds post exercise

Peak systolic and diastolic blood pressures recorded during various exercises. * and ** p < 0.05.



“Of Swords and Shields”

TABLE. The 12-Element AHA Recommendations for Preparticipation Cardiovascular Screening of Competitive Athletes

- 40% deaths**
 - Personal History
 - Exertional chest pain/discomfort
 - Unexplained syncope/near-syncope
 - Excessive exertional and unexplained dyspnea/fatigue, associated with exercise
 - Prior recognition of a heart murmur
 - Exercised systemic blood pressure
 - Family History
 - Premature death (sudden and unexpected, or otherwise) before age 50 years due to heart disease, in 1st relative
 - Disability from heart disease in a close relative <50 years of age
 - Specific knowledge of certain cardiac conditions in family members: hypertrophic or dilated cardiomyopathy, long QT syndrome or other ion channelopathies, Marfan syndrome, or clinically important arrhythmias
 - Physical examination
 - Heart murmur
 - Femoral pulses to exclude aortic coarctation
 - Physical signs of Marfan syndrome
 - Brachial artery blood pressure (left position)
- No uniform event.**
 - No case law cardiovascular

...V disease.

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...for undiscovered

