



HeartTrends®

HeartTrends® Test Report

Subject Name: Charles Stengel
 Subject ID: 317916
 Belt ID: H10A7831
 Date (YMD): 2020-06-04
 Test Time: 12:41
 Test Duration: 23 minutes
 Gender: Male
 Age: 55
 Weight (kg): 81
 Heart Rate (BPM): 73 ± 9

Health Factors

Diabetes	<input checked="" type="checkbox"/>	Family history	<input checked="" type="checkbox"/>
Ischemic Disease	<input type="checkbox"/>	Renal failure	<input type="checkbox"/>
Pacemaker	<input type="checkbox"/>	Hypertension	<input checked="" type="checkbox"/>
Myocarditis	<input type="checkbox"/>	Smoking	<input checked="" type="checkbox"/>
Alcohol	<input type="checkbox"/>	Cardiac Surgery	<input type="checkbox"/>
Beta Blocker	<input type="checkbox"/>	Dyslipidemia	<input type="checkbox"/>
Atrial Fibrillation	<input type="checkbox"/>	Heart Failure	<input type="checkbox"/>
Medications	<input type="checkbox"/>	Other	<input type="checkbox"/>

Other notes:
 Atorvastatin; Tritace

HeartTrends Score (MPW): 3.31

HeartTrends® Test Report Explained

Description: HeartTrends is a diagnostic test for early detection of myocardial ischemia in individuals *without* known coronary artery disease. This clinically proven test analyzes 20 minutes of heart rate data without any stressful maneuvers or heart strain. It is intended for screening patients without known coronary artery disease (CAD) who present with CAD risk factors or with atypical chest pain, offering an independent, new cardiac risk factor for enhanced patient diagnosis. Scores above 2.6 indicate a very low likelihood for the presence of significant cardiac ischemia with a very high negative predictive value (NPV) of 97%. Scores below 2.0 indicate an increased likelihood for the presence of cardiac ischemia. Be sure to rule out arrhythmias and other exclusionary conditions.

HeartTrends Guidelines for Ischemia Detection and Risk Assessment

HT Score	Traditional Risk Score Calculator ¹	HeartTrends Score >2 =negative (good)	Adjusted Risk Category for Silent Ischemia ²	Recommendation ³
	7.0	0-6%	Negative	Low risk
2.6	7-12%	Negative		
2.0	>12%	Negative	Intermediate risk	Lifestyle modification
	0-6%	Positive		
	7-12%	Positive	High risk	Consult physician
1.0	>12%	Positive	Very high risk	Evaluate by cardiologist

¹ HeartTrends Calculator: www.hearttrends.com/risk-score-calculator
² J Am Heart Assoc. 2019 Dec 17;8(24):e014540
³ If ECG abnormal, reduce Adjusted Risk Category by one level

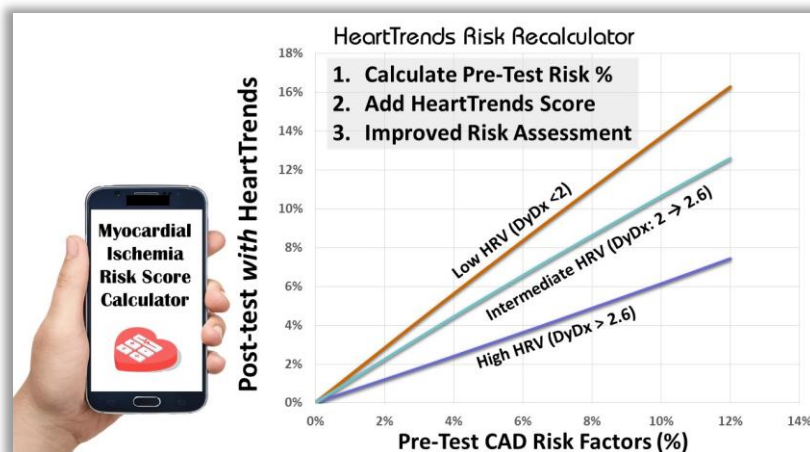
Scores displayed as (N.nn*) mean the test duration was too short and the results may be inconclusive



Pathophysiology: Low heart rate variability (HRV) is associated with sympathetic and parasympathetic imbalance. Prior studies have shown that low HRV identifies subjects with increased risk for all-cause mortality, and cardiac events. The HeartTrends test uses a unique Multipole Parameter Weight (MPW) algorithm that enables identification of active myocardial ischemia based on the fact that there is also an imbalance between sympathetic and parasympathetic activity among subjects with significant coronary artery disease.

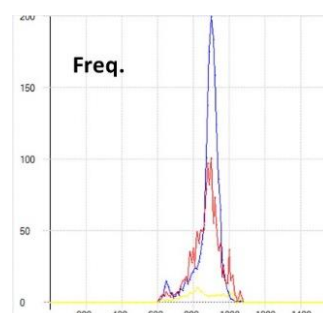
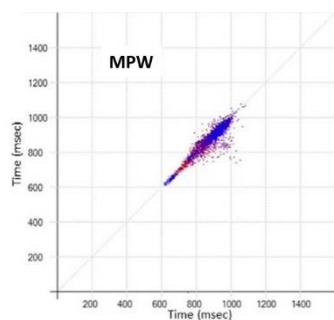
Clinical evidence: HeartTrends has been shown to be at least as reliable as exercise testing for the detection of cardiac ischemia in individuals without known disease (American J. Cardiology, 2015; 115:1518) and to provide incremental diagnostic data for ischemia to conventional CAD risk factors. Sensitivity on these 450 subjects was 77% and NPV was 98%. Exercise testing in a large prospective, multicenter, international study with the Mayo Clinic & Sheba Hospital (J. American Heart Assoc. 2019; 8:e014540) providing an important risk assessment and re-stratification tool (see graph below). Sensitivity on those 1,043 subjects was 71% and NPV was 97%.

Clinical exclusion criteria: Because the accuracy of HeartTrends relies on analysis of a normal heart rate unaffected by arrhythmias, good clinical practice recommends not applying the test on the following subjects: presence of a cardiac pacemaker or arrhythmias, established CAD, atrial fibrillation or flutter, diagnosis of an acute coronary syndrome or typical angina, clinical diagnosis of heart failure, moderate or severe pulmonary disease, acute myocarditis or any presence of cardiomyopathy, previous cardiac surgery, clinical depression, caffeine (e.g., Red Bull), known drug or alcohol dependence, presence of left bundle branch block, significant intra-ventricular conduction delay or significant (>1mm) ST deviations at baseline. Athletes should use a treadmill to attain true target heart rate measurements.



Professor Ilan Goldenberg, MD
Professor of Medicine (Cardiology)
Director, Clinical Cardiovascular Research Center
University of Rochester Medical Center

Diagnosing Physician (optional): _____



CE Notice

CE 0344

*HeartTrends has CE certification in Europe & FDA-cleared algorithm

www.HeartTrends.com