

Risk stratification guidance and scoring

Risk classification is an important health assessment tool with which all fitness professionals should be familiar. It is a systematic screening developed by the American College of Sports Medicine (ACSM) that addresses signs and symptoms of heart disease, risk factors for heart disease and family history.

Risk classification is determined based on the presence or absence of a known cardiovascular, pulmonary, renal or metabolic disease or the presence or absence of symptoms of these diseases. Diseases are known if the client has already been diagnosed by a doctor. Signs and symptoms may or may not have been diagnosed but will aid an instructor's ability to classify the client's risk appropriately.

Risk stratification scoring system

Risk factors	Criteria	Rating
Age	Men $\geq$ 45 years, Women $\geq$ 55 years	+1
Family history	Myocardial infarction, coronary revascularisation, or sudden death before 55 years of age in father or other 1st degree male relative or before 65 years of age in mother or other 1st degree female relative	+1
Cigarette smoking	Current cigarette smoker or those who quit within the previous 6 months, or exposure to environmental tobacco smoke (ie, second-hand smoke)	+1
Sedentary lifestyle	Not participating in at least 30 minutes of moderate-intensity physical activity on at least three days/week for at least 3 months	+1
Obesity	Body mass index $\geq$ 30 or waist circumference $>$ 102 cm (40 inches) for men $>$ 88 cm (35 inches) for women	+1
Cholesterol	Low-density lipoprotein (LDL) cholesterol $\geq$ 130mg/dL (3.37mmol/L) or high-density lipoprotein (HDL) cholesterol $<$ 40mg/dL (1.04mmol/L) or currently on lipid-lowering medication. If total serum cholesterol is all that is available, use serum cholesterol $>$ 200 mg/dL (5.18mmol/L)	+1
Diabetes	Fasting plasma glucose $\geq$ 100 mg/dL (5.50 mmol/L) but $<$ 126 mg/dL (6.93 mmol/L) or impaired glucose tolerance (IGT) where a 2-hour oral glucose tolerance test (OGTT) value is $\geq$ 140 mg/dL (7.70 mmol/L), but $<$ 200 mg/dL (11.00mmol/L)	+1

Negative risk factor	Criteria	Rating
High HDL Cholesterol	≥60 mg/dL (1.55 mmol/L)	-1

Following completion of this risk stratification, a risk rating figure will have been established. The ratings will provide guidance for the next steps and how appropriate it is for a client to undertake physical activity. The ratings are:

Low risk: Less than 2

Moderate risk: More than 2

High risk: More than 2 and known heart problems including hypertension.