

**Table 5.2: Methods of Measuring/Predicting Relative Exercise of Cardiorespiratory Exercise Intensity  
Cardiorespiratory Endurance Exercise**

Intensity	Relative Intensity				Intensity (%VO <sub>2max</sub> ) Relative to Maximal Exercise Capacity in METs			Absolute Intensity METS	Absolute Intensity (MET) by Age		
	%HRR/VO <sub>2R</sub>	%HR <sub>max</sub>	%VO <sub>2max</sub>	RPE (6-20)	20 METs %VO <sub>2max</sub>	10 METs %VO <sub>2max</sub>	5 METs %VO <sub>2max</sub>		Young (20-39 y.o.)	Middle Age (40-64 y.o.)	Older (>65 y.o.)
Very Light	<30	<57	<37	Very light (RPE <9)	≤34	<37	<44	<2.0	<2.4	<2.0	<1.6
Light	30-39	57-63	37-45	Very light to fairly light (RPE 9-11)	34-42	37-45	44-51	2.0-2.9	2.4-4.7	2.0-3.9	1.6-3.1
Moderate	40-59	64-76	46-63	Fairly light to somewhat hard (RPE 12-13)	43-61	46-63	52-67	3.0-5.9	4.8-7.1	4.0-5.9	3.2-4.7
Vigorous	60-89	77-95	64-90	Somewhat hard to very hard (RPE 14-17)	62-90	64-90	68-91	6.0-8.7	7.2-10.1	6.0-8.4	4.8-6.7
Near-maximal to Maximal	>90%	≥96	≥91	≥Very hard (RPE ≥18)	≥91	≥91	≥92	≥8.8	≥10.2	≥8.5	≥6.8

HR<sub>max</sub>, Maximal heart rate; HRR, Heart rate reserve; MET, Metabolic equivalent; RPE, Rating of perceived exertion;  
VO<sub>2max</sub>, Maximal volume of oxygen consumed per unit time; VO<sub>2R</sub>, Oxygen Uptake Reserve (Adapted from (3) GETP11p148)