

Box 5.2 Summary of Methods for Prescribing Exercise Intensity Using Heart Rate (HR), Oxygen Uptake ($\dot{V}O_2$), and Metabolic Equivalents (METs)

- HRR method: target HR (THR) = $[(HR_{\text{max/peak}}^a - HR_{\text{rest}}) \times \% \text{ intensity desired}] + HR_{\text{rest}}$
- $\dot{V}O_2$ method: target $\dot{V}O_2 R^b = [(\dot{V}O_{2\text{max/peak}}^c - \dot{V}O_{2\text{rest}}) \times \% \text{ intensity desired}] + \dot{V}O_{2\text{rest}}$
- HR method: target HR = $HR_{\text{max/peak}}^a \times \% \text{ intensity desired}$
- $\dot{V}O_2$ method: target $\dot{V}O_2^b = \dot{V}O_{2\text{max/peak}}^c \times \% \text{ intensity desired}$
- MET method: target MET^b = $[(\dot{V}O_{2\text{max/peak}}^c) / 3.5 \text{ mL} \cdot \text{kg}^{-1} \cdot \text{min}^{-1}] \times \% \text{ intensity desired}$

^a $HR_{\text{max/peak}}$ is the highest value obtained during maximal/peak exercise or it can be estimated via a prediction equation (see *Table 5.3*).

^bActivities at the target $\dot{V}O_2$ and MET can be determined using a compendium of physical activity (43, 44) or metabolic calculations (45) (see *Table D.1*).

^c $\dot{V}O_{2\text{max/peak}}$ is the highest value obtained during maximal/peak exercise or it can be estimated from a submaximal exercise test. See "The Concept of Maximal Oxygen Uptake" section in *Chapter 3* for the distinction between $\dot{V}O_{2\text{max}}$ and $\dot{V}O_{2\text{peak}}$. $HR_{\text{max/peak}}$, maximal or peak heart rate; HRR, heart rate reserve; HR_{rest} , resting heart rate; $\dot{V}O_{2\text{max/peak}}$, maximal or peak volume of oxygen consumed per unit of time; $\dot{V}O_{2R}$, oxygen uptake reserve; $\dot{V}O_{2\text{rest}}$, resting volume of oxygen consumed per unit of time.