

TABLE 2. Evidence statements and summary of recommendations for the individualized exercise prescription.

		Evidence-Based Recommendation	Evidence Category
<b>Cardiorespiratory ("aerobic") exercise</b>			
Frequency		$\geq 5$ d-wk <sup>-1</sup> of moderate exercise, or $\geq 3$ d-wk <sup>-1</sup> of vigorous exercise, or a combination of moderate and vigorous exercise on $\geq 3$ –5 d-wk <sup>-1</sup> is recommended.	A
Intensity		Moderate and/or vigorous intensity is recommended for most adults. Light- to moderate-intensity exercise may be beneficial in deconditioned persons.	A B
Time		30–60 min-d <sup>-1</sup> (150 min-wk <sup>-1</sup> ) of purposeful moderate exercise, or 20–60 min-d <sup>-1</sup> (75 min-wk <sup>-1</sup> ) of vigorous exercise, or a combination of moderate and vigorous exercise per day is recommended for most adults. <20 min-d <sup>-1</sup> (<150 min-wk <sup>-1</sup> ) of exercise can be beneficial, especially in previously sedentary persons.	A
Type		Regular, purposeful exercise that involves major muscle groups and is continuous and rhythmic in nature is recommended.	B A
Volume		A target volume of $\geq 500$ –1000 MET-min-wk <sup>-1</sup> is recommended. Increasing pedometer step counts by $\geq 2000$ steps per day to reach a daily step count $\geq 7000$ steps per day is beneficial. Exercising below these volumes may still be beneficial for persons unable or unwilling to reach this amount of exercise.	C B C
Pattern		Exercise may be performed in one (continuous) session per day or in multiple sessions of $\geq 10$ min to accumulate the desired duration and volume of exercise per day. Exercise bouts of <10 min may yield favorable adaptations in very deconditioned individuals. Interval training can be effective in adults.	A B B
Progression		A gradual progression of exercise volume by adjusting exercise duration, frequency, and/or intensity is reasonable until the desired exercise goal (maintenance) is attained. This approach may enhance adherence and reduce risks of musculoskeletal injury and adverse CHD events.	B D
<b>Resistance exercise</b>			
Frequency		Each major muscle group should be trained on 2–3 d-wk <sup>-1</sup> .	A
Intensity		60%–70% of the 1RM (moderate to hard intensity) for novice to intermediate exercisers to improve strength. $\geq 80\%$ of the 1RM (hard to very hard intensity) for experienced strength trainers to improve strength. 40%–50% of the 1RM (very light to light intensity) for older persons beginning exercise to improve strength. 15%–50% of the 1RM (very light to light intensity) may be beneficial for improving strength in sedentary persons beginning a resistance training program. <50% of the 1RM (light to moderate intensity) to improve muscular endurance. 20%–50% of the 1RM in older adults to improve power.	A A A D
Time		No specific duration of training has been identified for effectiveness.	A
Type		Resistance exercises involving each major muscle group are recommended. A variety of exercise equipment and/or body weight can be used to perform these exercises.	A A
Repetitions		8–12 repetitions is recommended to improve strength and power in most adults. 10–15 repetitions is effective in improving strength in middle aged and older persons starting exercise 15–20 repetitions are recommended to improve muscular endurance	A A A
Sets		Two to four sets are the recommended for most adults to improve strength and power. A single set of resistance exercise can be effective especially among older and novice exercisers. $\leq 2$ sets are effective in improving muscular endurance.	A A A
Pattern		Rest intervals of 2–3 min between each set of repetitions are effective. A rest of $\geq 48$ h between sessions for any single muscle group is recommended.	B A
Progression		A gradual progression of greater resistance, and/or more repetitions per set, and/or increasing frequency is recommended.	A
<b>Flexibility exercise</b>			
Frequency		$\geq 2$ –3 d-wk <sup>-1</sup> is effective in improving joint range of motion, with the greatest gains occurring with daily exercise.	B
Intensity		Stretch to the point of feeling tightness or slight discomfort.	C
Time		Holding a static stretch for 10–30 s is recommended for most adults. In older persons, holding a stretch for 30–60 s may confer greater benefit. For PNF stretching, a 3- to 6-s contraction at 20%–75% maximum voluntary contraction followed by a 10- to 30-s assisted stretch is desirable.	C C B
Type		A series of flexibility exercises for each of the major muscle-tendon units is recommended. Static flexibility (active or passive), dynamic flexibility, ballistic flexibility, and PNF are each effective.	B B
Volume		A reasonable target is to perform 60 s of total stretching time for each flexibility exercise.	B
Pattern		Repetition of each flexibility exercise two to four times is recommended. Flexibility exercise is most effective when the muscle is warmed through light to moderate aerobic activity or passively through external methods such as moist heat packs or hot baths.	B A
Progression		Methods for optimal progression are unknown.	
<b>Neuromotor exercise training</b>			
Frequency		$\geq 2$ –3 d-wk <sup>-1</sup> is recommended.	B
Intensity		An effective intensity of neuromotor exercise has not been determined.	
Time		$\geq 20$ –30 min-d <sup>-1</sup> may be needed.	B
Type		Exercises involving motor skills (e.g., balance, agility, coordination, and gait), proprioceptive exercise training, and multifaceted activities (e.g., tai ji and yoga) are recommended for older persons to improve and maintain physical function and reduce falls in those at risk for falling. The effectiveness of neuromuscular exercise training in younger and middle-aged persons has not been established, but there is probable benefit.	B D
Volume		The optimal volume (e.g., number of repetitions, intensity) is not known.	
Pattern		The optimal pattern of performing neuromotor exercise is not known.	
Progression		Methods for optimal progression are not known.	

Table evidence categories: A, randomized controlled trials (rich body of data); B, randomized controlled trials (limited body of data); C, nonrandomized trials, observational studies; D, panel consensus judgment. From the National Heart Lung and Blood Institute (263).