

DCE JADA Supplement

The Role of Physical Activity in Diabetes Management and Prevention

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Figure 2: Exercise Recommendations for General Health and Diabetes Management and Prevention

Statement	Population	Aerobic Exercise	Resistance Exercise	Flexibility Stretching
Haskell and colleagues, 2007 (6)	US Adults	<p>Frequency: 5 days per week of moderate activity or 3 days per week of vigorous activity</p> <p>Intensity: 3.0-6.0 METs^a (moderate) to >6.0 METs (vigorous)</p> <p>Duration: 20-30 minutes per session with minimum of 10 min/activity session</p>	<p>Frequency: ≥2 nonconsecutive days/week</p> <p>Intensity: Weight that can be lifted 8-12 times (40%-60% 1 RM^b)</p> <p>Duration: 8-10 exercises</p>	<p>Frequency: On days when aerobic or resistance activity is performed</p> <p>Intensity: Stretch to moderate discomfort</p> <p>Duration: 10 min/session; 3-4 repetitions/stretch, hold each stretch for 10-30 seconds/repetition</p>

Statement	Population	Aerobic Exercise	Resistance Exercise	Flexibility Stretching
American Diabetes Association, 2007 (47)	Diabetes Prevention	<p>≥150 min/week of moderate to vigorous physical activity</p> <p>Engage in at least 30 min/day of activity (above usual activity) most days of the week; 10-30 min/activity session</p>		No recommendation for or against flexibility as a routine part of an exercise prescription

Statement	Population	Aerobic Exercise	Resistance Exercise	Flexibility Stretching
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Sigal and colleagues, 2006 (27)	Type 2 Diabetes	Frequency: 3-7 days/week with no more than 2 consecutive days without activity Intensity: 50% - \geq 70% HRmax ^c (moderate – vigorous) Duration: \geq 150 min/week of moderate activity or \geq 90 min/week of vigorous activity; minimum of 10 min/activity session	Frequency: \geq 3 days/week (at least 48 h between sessions) Intensity: Weight that cannot be lifted > 8-10 times (40%-60% of 1 RM) Duration: \geq 8 exercises, 8-10 reps each, up to 3 sets	No recommendation for or against flexibility as a routine part of an exercise prescription
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Statement	Population	Aerobic Exercise	Resistance Exercise	Flexibility Stretching
Haskell and colleagues, 2007 (6) ACSM 2006 (48)	Type 1 Diabetes	Frequency: 3-4 days/week with no more than 2 consecutive days without activity Intensity: 50% - 80% HRR ^d Duration: 20-60 min/session or \geq 150 min/week of moderate activity or \geq 90 min/week of vigorous activity; minimum of 10 min/activity session	Frequency: \geq 2 nonconsecutive days/week Intensity: Weight that can be lifted 10-15 times (40%-60% 1 RM) Duration: 8-10 exercises, 1-3 sets	Frequency: On days when aerobic or resistance activity is performed Intensity: Stretch to moderate discomfort Duration: 10 min/session; 3-4 repetitions/stretch, hold each stretch for 10- 30 sec/repetition

Statement	Population	Aerobic Exercise	Resistance Exercise	Flexibility Stretching
Haskell and colleagues 2007 (6)	Weight Management <ul style="list-style-type: none"> ● Prevention of Weight Gain ● Prevention of Weight Re-gain 	<p>~ 60 min. of moderate-intensity physical activity, above usual activity, on most days of the week</p> <p>At least 60-90 min. of moderate daily activity (to accrue 2000 – 2500 calorie/week energy expenditure)</p>		

Figure 2: Exercise recommendations for general health and diabetes management and prevention. Recommended amounts of activity are in addition to routine activities of daily living. Adults are defined as aged 18 – 65 years.^aMETs=metabolic equivalents; expresses oxygen uptake relative to resting values (one MET represents resting energy expenditure). ^bRM=repetition maximum; highest amount of weight lifted or resistance tolerated with maximal effort on one repetition. ^cHRmax=maximal heart rate; highest heart rate achieved during progressive maximal exercise test or estimated using formula $HR_{max} = 220 - \text{age}$. ^dHRR=heart rate reserve; calculated by subtracting resting heart rate (HRrest) from HRmax: $HRR = HR_{max} - HR_{rest}$.

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