Benefits of Regular Physical Activity

- Helps you manage your weight
- Reduces your risk of coronary heart disease
- Reduces your risk of stroke
- Decreases blood pressure
- Reduces your risk of colon cancer
- Helps prevent and control diabetes
- May decrease “bad” (LDL) cholesterol and raise “good” (HDL) cholesterol
- Helps you sleep better
- Strengthens bones, reduces pain, and helps prevent injury
- Increases muscular strength and endurance
- Increases flexibility and range of motion
- Improves your mood
- Reduces stress and depression
- Improves self-esteem
- Makes you feel better
Activities to Fit Your Lifestyle

Exercise does not have to be planned. Think of all the ways you can be active during your day:

- Walk or ride a bike for transportation.
- Take the stairs instead of the elevator.
- Park at the far end of the parking lot and walk.
- Get off the bus one stop early and walk the rest of the way.
- Walk your dog, or borrow someone else’s dog.
- Take a brisk walk while you are shopping at the mall, or at the end of your lunch break.
- Walk to your mailbox.
- Mow the grass. Rake the leaves. Weed the garden. Then do your neighbors.
- Dance whenever you can.
- Wash your car…by hand.
- Vacuum or sweep the floor often.
- Get up to change the TV channel; don’t use the remote.
- March in place during TV commercials.
- Stretch or do chair exercises while watching TV.
- Stand up and step in place or pace the room while using the phone.
- Walk down the hall to talk to a co-worker instead of using the phone or sending an e-mail.
- On work breaks, take a 5–10 minute walk.
- If you play golf, walk every hole.
- Carry your groceries instead of pushing a cart.
- Stand at your desk while checking your e-mail.
- Take the long way to and from places.
How to Take Your Heart Rate

Taking your pulse during physical activity allows you to measure how hard you are exercising. You should exercise to stay within your target heart range.

You will need a clock or stopwatch that is digital or has a second-hand. You want to 

time 15 seconds, or one quarter of a minute.

- Use your index and middle fingers. Don’t use your thumb—it has a pulse of its own.
- Place these two fingers on your wrist, just below the base of the thumb.
- Count the number of beats (pulses) for 15 seconds.
- Take this number and multiply by 4 to find your heart rate in beats per minute. For example, if you count 25 beats, $25 \times 4 = 100$ beats per minute.
  - If you have difficulty with math, try doubling the number twice. 25 doubled is 50. 50 doubled is 100. So your heart rate in beats per minute is 100.

Increasing your heart rate is a key part of exercise, but it is important that your heart rate is not too high or too low. If you are a beginner, you should also be able to breathe comfortably while exercising. This will ensure that you are exercising at a level that is safe and effective for your body.
The chart illustrates target heart rate ranges for exercise based on the maximal heart rate for selected ages. For example, the target exercise heart rate range for a 45-year-old will be 88–149 beats per minute (moderate-to-vigorous activity range).

**Here are the steps for using the chart:**

- Measure your exercise heart rate in beats per minute (described above).
- Look at the chart.
  - Find your age. If your age falls between the ages listed, round up to the next older age listed.
  - Compare your heart rate to the target exercise range.
- If you are doing **moderate exercise**, your heart rate should be closer to the 50% range.
- If you are doing **vigorous exercise**, your heart rate should be closer to the 85% range.
- Try to stay in the **50–85% range** when exercising by increasing or decreasing exercise intensity.

### Target Heart Rate Ranges Based on Age

**Target Heart Rate Zones**

50%–85% of Maximum Heart Rate

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>50% (BPM)</th>
<th>70% (BPM)</th>
<th>85% (BPM)</th>
<th>Maximum Heart Rate (BPM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>100</td>
<td>140</td>
<td>170</td>
<td>200</td>
</tr>
<tr>
<td>25</td>
<td>98</td>
<td>137</td>
<td>166</td>
<td>195</td>
</tr>
<tr>
<td>30</td>
<td>95</td>
<td>133</td>
<td>162</td>
<td>190</td>
</tr>
<tr>
<td>35</td>
<td>93</td>
<td>130</td>
<td>157</td>
<td>185</td>
</tr>
<tr>
<td>40</td>
<td>90</td>
<td>126</td>
<td>153</td>
<td>180</td>
</tr>
<tr>
<td>45</td>
<td>88</td>
<td>123</td>
<td>149</td>
<td>175</td>
</tr>
<tr>
<td>50</td>
<td>85</td>
<td>119</td>
<td>145</td>
<td>170</td>
</tr>
<tr>
<td>55</td>
<td>83</td>
<td>116</td>
<td>140</td>
<td>165</td>
</tr>
<tr>
<td>60</td>
<td>80</td>
<td>112</td>
<td>136</td>
<td>160</td>
</tr>
<tr>
<td>65</td>
<td>78</td>
<td>109</td>
<td>132</td>
<td>155</td>
</tr>
<tr>
<td>70</td>
<td>75</td>
<td>105</td>
<td>128</td>
<td>150</td>
</tr>
<tr>
<td>75</td>
<td>73</td>
<td>102</td>
<td>123</td>
<td>145</td>
</tr>
<tr>
<td>80</td>
<td>70</td>
<td>98</td>
<td>119</td>
<td>140</td>
</tr>
<tr>
<td>85</td>
<td>68</td>
<td>95</td>
<td>115</td>
<td>135</td>
</tr>
</tbody>
</table>

Some **medications** may keep your heart rate from going too high. If you are taking medicine for your heart or blood pressure, check with your health care team about how hard you should exercise.
Planned Physical Activities

There are many ways to become more active. For fitness and variety, choose activities from all three categories below. Choose activities you enjoy.

AEROBIC ACTIVITIES
- Walking
- Stair climbing
- Gardening
- Dancing (any type)
- Sports
- Jogging or running
- Aerobics classes
- Roller or ice skating
- Snow skiing
- Some exercise machines (treadmill, elliptical, stationary bike, rowing machine, ski machine)
- Non-weight bearing and low-impact activities, which are good for everyone but particularly beneficial for those with arthritis
- Swimming
- Bicycling
- Water walking or water aerobics
- Free weights (dumbbells, plastic bottles of water, cans of food, etc.)

STRENGTH ACTIVITIES
- Resistance bands
- Conditioning exercises (for example, sit-ups, push-ups, and pull-ups)
- Pilates
- Circuit machines
- Medicine and balance balls

FLEXIBILITY ACTIVITIES
- Stretching
- Chair exercises
- Yoga
- Tai Chi
- Pilates
# Calories Burned During Physical Activities

The following table gives the number of calories you burn doing 10 minutes of each physical activity listed. The calories will vary depending on a number of factors including weight, age, and environmental conditions. The figures given are for men ranging in weight from 175–250 lbs. and women ranging from 140–200 lbs. If you weigh more than this, you will burn more calories per minute.

<table>
<thead>
<tr>
<th>Physical Activity</th>
<th>Light Activity</th>
<th>Vigorous Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MALE</strong></td>
<td><strong>FEMALE</strong></td>
<td></td>
</tr>
<tr>
<td>Ballroom Dancing</td>
<td>35–50</td>
<td>28–40</td>
</tr>
<tr>
<td>Cleaning, Sweeping at moderate effort</td>
<td>26–38</td>
<td>21–30</td>
</tr>
<tr>
<td>Washing Dishes</td>
<td>29–42</td>
<td>23–30</td>
</tr>
<tr>
<td>Tai Chi</td>
<td>35–50</td>
<td>28–40</td>
</tr>
<tr>
<td><strong>Moderate Activity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bicycling at &lt;10 miles per hour</td>
<td>46–66</td>
<td>37–53</td>
</tr>
<tr>
<td>Step Aerobics</td>
<td>64–91</td>
<td>51–73</td>
</tr>
<tr>
<td>Cleaning Gutters</td>
<td>58–83</td>
<td>46–66</td>
</tr>
<tr>
<td>Mowing the Lawn</td>
<td>64–91</td>
<td>51–73</td>
</tr>
<tr>
<td>Raking Leaves</td>
<td>44–63</td>
<td>35–50</td>
</tr>
<tr>
<td>Walking at 4 miles per hour</td>
<td>58–83</td>
<td>46–66</td>
</tr>
<tr>
<td>Shoveling Snow</td>
<td>61–88</td>
<td>49–70</td>
</tr>
<tr>
<td>Bowling</td>
<td>44–63</td>
<td>35–50</td>
</tr>
<tr>
<td>Golf, Walking and Pulling Clubs</td>
<td>61–88</td>
<td>49–70</td>
</tr>
<tr>
<td>Slow Lap-Swimming</td>
<td>63–90</td>
<td>54–72</td>
</tr>
<tr>
<td><strong>Vigorous Activity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jogging (9 min/mile)</td>
<td>149–213</td>
<td>119–170</td>
</tr>
<tr>
<td>Basketball</td>
<td>75–108</td>
<td>60–86</td>
</tr>
<tr>
<td>Carrying Groceries Upstairs</td>
<td>87–125</td>
<td>70–100</td>
</tr>
</tbody>
</table>
Walk

Walking is a great way to be more physically active. It’s free, fun, and you can do it almost anywhere.

Here are six reasons to get up and walk:

1. Regular walking burns calories, which, in addition to a healthy diet, can help you manage your weight.

2. More than half of the body’s muscles are designed for walking, which makes it a very natural movement for the body.

3. Regular, brisk walking has many health benefits.

4. Brisk walking is an aerobic activity. It makes your heart, lungs, and muscles stronger.

5. Regular walking refreshes the mind, reduces fatigue, increases energy, and improves sleep.

6. Walking can be a great time to share and socialize with friends and family.

Getting started:

- A little walking everyday is better than an occasional weekend bout of activity. Start with short, 10-minute walks and build from there.
- Consider using a pedometer to measure the number of steps you walk.
- Warm up before and cool down after activity.
• Choose routes that are interesting, safe, and convenient. Avoid heavy traffic, loose dogs, and rough or uneven ground. Remember hills are more difficult. You may want to start out on flat ground and progress to hills later.

• Walking with others can help motivate you and help to pass the time in an enjoyable way.

• Be safe. Take a friend when it is dark outside. Tell someone where you are going, and bring a cell phone if you can.

• When it is very hot, walk during the coolest hours of the day, choose a shady route, and walk a little slower.

• When it is cold, watch for ice.

• Dress in loose, comfortable clothing. In cold weather, dress in layers and wear mittens and a hat.

• Wear comfortable, appropriate shoes.

SAMPLE 10-WEEK WALKING PLANS TO GET YOU STARTED

Plan for those who are beginning a walking program

<table>
<thead>
<tr>
<th>Week</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minutes walking</td>
<td>10</td>
<td>10</td>
<td>15</td>
<td>18</td>
<td>20</td>
<td>20</td>
<td>25</td>
<td>30</td>
<td>32</td>
<td>35</td>
</tr>
<tr>
<td>Walks per week</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3–4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

Plan for those who are already physically active

<table>
<thead>
<tr>
<th>Week</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minutes walking</td>
<td>20</td>
<td>22</td>
<td>25</td>
<td>30</td>
<td>30</td>
<td>35</td>
<td>35</td>
<td>40</td>
<td>42</td>
<td>45</td>
</tr>
<tr>
<td>Walks per week</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4–5</td>
<td>4–5</td>
<td>4–5</td>
<td>4–5</td>
</tr>
</tbody>
</table>
Strength Training Benefits

There are many benefits to strength training. Strength training helps increase muscular strength. Muscular strength is the ability of a muscle to lift or resist a force against it.

Here are some of them:

• Builds your muscle strength and endurance
• Improves your balance and coordination, making a fall less likely
• Helps firm and tone your muscles
• Makes it easier to do chores such as carrying groceries, shoveling snow, or yard work
• Prevents muscle tissue loss that comes with aging
• Keeps bones strong
• Whether you have diabetes or not, it improves your body’s ability to use insulin and maintain healthy blood sugar levels
• Helps your body burn more calories
• Takes stress off your joints
• Helps you lose weight and keep it off
• Protects your independence as you age
When to Stop Exercising

Being as physically active as possible protects your health. The benefits of physical activity far outweigh any potential risk. Listen to your body. Stop exercising if you have any of these symptoms:

- Pain, tightness, pressure, or discomfort in your chest, neck, shoulder, arm, back, or jaw
- Severe shortness of breath
- Cold sweats
- Severe nausea or vomiting
- Muscle cramps
- Sudden weakness or changes in feeling in your arms and/or legs
- Trouble swallowing, talking, or seeing
- Severe headache, dizziness, or lightheadedness
- Severe joint pain

If symptoms don't go away after a few minutes, call 911. If the symptoms go away, but return each time you exercise, talk with your health care team.
Precautions with Exercise

Location of injections
- Don’t administer insulin into a major muscle group that you are expecting to use. For example: legs before running

Timing of medication administration
- Do not exercise during peak insulin times
  - Rapidly acting analogs peak 1-3 hours
  - Short acting human peak 2-4 hours
  - Intermediate acting human peak 4-10 hours
  - Long-acting analogs- flat/no peak
- Avoid exercising late at night. Delayed hypoglycemia may occur after heavy exercise, especially if this is not a routine exercise regime.

Goal Blood Glucose levels Prior to Exercise & Monitoring Blood Glucose
- > 250mg/dl - Check for Ketones in the Urine
  *** Ketones form during the breakdown of fat for energy, which occurs only when no insulin is present or no insulin is able to be utilized to convert carbohydrates into energy.
  - Moderate to High Ketones- Administer Insulin and wait
  - Low ketones - Low Intensity Exercise is Safe
  - > 300 mg/dl - No Exercise regardless of Ketones
  - < 100 mg/dl - Consider eating a snack of Carbohydrates

Consider checking blood sugars: During prolonged exercise, Immediately After, and Several Hours after All types of Exercise.

- If start feeling Sick: Ingest fast-acting Carbohydrate and check in 15 minutes.
- Be aware of additional things which may affect your blood sugar and insulin sensitivity. For example: Stress, Illness, etc.

Timing, Amount, and Type of previous Food Intake
- Exercise is best 1 hour after eating for most people
- Exercise within 2 hours of having a snack to a meal

Exercise with a friend until you know how exercise will affect you!

Wear a Diabetes ID bracelet when exercising
Programs Offered at the New Mexico VA Medical Center

1. Pool Therapy: Doctor’s consult required. Water aerobics program which is 3 days per week. Must be able to get in the pool unassisted. Must not have incontinence or any open wounds.

2. Wellness Program: Doctor’s consult required. After an evaluation by a physical therapist, Veterans are given access to gym equipment on the 2nd floor of the main hospital (Building 41) 2 days per week.

3. P.A.V.E.: Prevention Against Amputation of Vets Everywhere, Doctor’s consult required, Diabetes, neuropathy, etc.

4. MOVE! : Managing Overweight in Vets Everywhere. Doctor’s consult required. Options include a one-time appointment, 90 day telephone program, or 4 month individual or weekly class series.

5. Geriatric Women’s Group: Doctor’s Consult required. Women must be 55 years of age or older.

6. Recreation Therapy: No Doctor consult required. Numerous free activities at the Recreation hall (Building 1). Consult for Recreation Therapy or pick up a calendar of events at Building 1.
   a. Example activities may include: Yoga, Tai Chi, Fly fishing, Adaptive sports, Ham radio, Creative writing, Watercolor paintings, Guitar lessons, AA meetings, Pet therapy, and more!

7. Diabetes Exercise Class: This walk-in class is every Wednesday at 10:30 AM on the 2nd floor of Building 41. High Intensity Interval Training program with Diabetes educator and physical therapist. Please bring your glucometer to class.

Ask Your Primary Care Provider for more details and a referral to services.

Reviewed and Approved by:
The Veteran Health Education Committee
November 2016