

## Warm up!

Most people start exercise sessions or workouts with a warm-up, although there are many questions about their effectiveness. Warming up appears to reduce injury to muscles and tendons but other types of injury may not be reduced. Warm-ups along with other steps may help prevent exercise-induced migraines. It is not clear if warming up improves athletic performance.

One goal of a warm-up is to raise the temperature of the muscle which increases blood flow, providing more oxygen, and speeds up nerve transmission, muscle contraction and reaction time. Muscle temperature can be raised by general activity (jogging, calisthenics, cycling, etc.) or activity specific to the sport/event to be performed, usually mimicking the activity. Muscle temperature also can be raised passively by hot showers, saunas, heating pads and the like. Passive warming is useful if it is important to conserve as much energy as possible, or if there is a delay between an active warm-up and the activity itself. Otherwise, active warm-up techniques specific to the activity are the most effective. Active warm-up should be done so that a light to mild level of sweating develops but not to the point of

fatigue, which can impair performance in the short term. People in poor condition will warm up more quickly than well conditioned athletes.

These are the current recommendations:

- start all activity sessions with a warm-up.
- warm up through activity; if you have to wait between your warm-up and your activity, add passive warm-up measures.
- mimic the activity you will be doing by using the same muscles in similar motions.
- warm up to the point of a light to mild level of sweating.
- end your warm-up before your muscles are fatigued.

Woods, Bishop and Jones. Warm-up and stretching in the prevention of muscular injury. Sports Medicine, 2007  
Fradkin, Gabbe and Cameron. Does warming up prevent injury in sport? The evidence from randomized controlled trials. Journal of Science & Medicine in Sport, 2006.  
Nadelson. Sport and exercise-induced migraines. Current Sports Medicine Reports, 2006.  
Bishop. Warm up I and Warm up II, Sports Medicine, 2003.

### Recipe of the Week: Carrot Applesauce Cake with Cream Cheese Glaze

adapted from Jane Brody's Good Food Book (cake) and Cooking Light (glaze) -- 16 servings

1 ½ cups white flour  
½ cup whole wheat pastry flour  
2/3 cup to 1 cup sugar  
2 teaspoons baking soda  
1 ½ teaspoons cinnamon  
½ teaspoon nutmeg  
1/8 teaspoon salt  
¼ cup canola oil  
¾ cup unsweetened applesauce  
2 whole eggs and 2 egg whites  
3 cups coarsely grated carrots – about ¾ pound

1. In large bowl combine dry ingredients. In small bowl combine applesauce, oil, eggs and egg whites. Add to dry ingredients, stir, add carrots, and stir again.

2. Pour into bundt or tube pan sprayed with cooking spray. Bake in preheated 350 degree oven for about 1 hour 10 minutes or until toothpick comes out clean. Cool in pan 5 minutes, turn out onto wire rack to cool.

Glaze (Spread on warm cake)

½ cup reduced fat cream cheese, softened  
½ cup powdered sugar  
½ teaspoon vanilla  
2 tablespoons lowfat milk

In a bowl, beat cream cheese and powdered sugar with a mixer till well mixed. Add vanilla, beat again. Add milk 1 Tablespoon at a time, till of desired consistency.

**Nutrition facts:** Calories: 174      Total Fat 6g  
Saturated Fat 1.3 g      Sodium 247 mg  
Carbohydrate 28g      Dietary Fiber 2 g      Protein 4 g

**Tip of the Week:** Here are “great pumpkin” ideas! For the best flavor, use “sugar” or “pie” pumpkins or canned unsweetened pumpkin puree. • Add pureed pumpkin to plain yogurt with cinnamon or to oatmeal with cinnamon and walnuts. • Toss roasted pumpkin pieces into any salad. • Mash pumpkin with cauliflower as a substitute for mashed potatoes. • Serve roasted pumpkin as a simple side dish instead of sweet potato. • Roast the seeds for snacks -- *Keri Glassman, MS, RD, CDN Lean and Fit, newsletters@email.washingtonpost.com*