Dealing with DOMS

It is normal to feel sore after exercise; however, aches and pains should be minor. The gradually increasing soreness you often feel 24 to 48 hours later is called delayed onset muscle soreness (DOMS) and is a natural outcome of any physical activity.

Your muscles should burn a little when walking, and you should feel a bit sore a few days after doing strengthening exercises. You know you’ve done too much if soreness prevents you from performing daily activities or if excessive soreness lasts three days or more after exercise. Here are some tips to promote recovery after exercise.

**Hydrate.** Water is the best way to hydrate during and after exercise. The easiest way to tell if you are dehydrated is by the color of your urine. It should be light yellow or clear within a couple of hours after exercise. If it is dark yellow, you need more hydration.

**Fuel.** After exercise, have a snack that contains carbohydrates and protein. Good choices include yogurt and almonds, peanut butter with a banana, rice cakes, or whole-wheat pretzels. Eating the right foods after exercise will improve your energy level and help with recovery.

**Circulation.** A light activity, such as an easy bike ride, light stretching, or slower walking, will stimulate blood flow and help you cool down after activity.

**Compression.** A massage or use of a foam roller can help move inflammatory fluids out of muscles and help with sore or tight spots.

**Rest.** Normal muscle soreness will peak about 48 hours after exercise and should be much better by the third day. This is why a rest day between strengthening exercises is recommended. If you want to do strengthening on consecutive days, alternate upper body exercise one day and lower body the next.
Exercise and Your Knees

Knee pain is common. Arthritis, injury, and overuse are the primary causes of knee pain. If you have knee pain it is important to keep moving even if you don't feel like it. Exercise is key to restoring knee function, decreasing pain, and it helps you lose extra pounds and maintain a healthy weight.

Low impact exercises are best for bad knees. Exercise can help alleviate swelling and stiffness, improve range of motion in the joint, and strengthen muscles around the knees to take off pressure. Research also shows that exercise can reduce the progression of knee osteoarthritis.

Weak quadriceps muscles can lead to knee instability and increasing wear and tear. Quads are the main muscles that support the knees, so strengthening these muscles will play an important role in knee function and pain management.

Another muscle group supporting the knees are hamstrings. Low-impact exercises like these below, will help stretch and strengthen the knee and supporting muscles.

Walking helps lubricate the joints, increase blood flow to tight muscles, and helps strengthen the muscles that surround your knee. A more knee-friendly option is longer, slower walks.

Biking is a safe option and it provides aerobic and strengthening benefits, targets the quadricep muscles, and promotes range of motion. Peddling will also strengthen your hamstrings and glutes.

Water exercise can help strengthen knee muscles, and the buoyancy of the water allows you to be active without putting pressure on your joints.

Strength training is a must to improve knee function. Bodyweight exercises that are good exercises for knees include straight leg raises (verywellhealth.com/how-to-the-straight-leg-raise-2696526) and squats or modified squats (walkkansas.org/doc/newsletter/2024/Week2_Eng_24.pdf).

Stretching is something you don’t want to skip as tight knee and leg muscles add to pain. Include knee quadriceps stretch (verywellfit.com/quadriceps-stretches-2696366) and standing hamstring stretch.

While these types of exercise can help with knee pain, make sure you start slowly, and gradually increase weight and repetitions. Gradually increase the amount of time you walk, bike, and exercise. Don't overdo it and stop any exercise that makes your pain worse. Avoid exercises that can overextend or put excessive pressure on your knees.

Habit Shift Challenge

Wake up muscles each morning, before your feet even hit the floor! Stretching while in bed can help set the tone for a calm, relaxed morning. Try this side-to-side rocking stretch. While lying on you back, bring your knees up and wrap your arms around them, then gently rock from side to side.

Walk Kansas Webinars

Missed a webinar or need to rewatch? Click the link below to view the recordings!

https://www.walkkansas.org/newsletter/2024.html

Like us on Facebook:
Kansas State University Walk Kansas

This newsletter developed by Sharolyn Flaming Jackson, Extension Specialist Family and Consumer Sciences, K-State Research and Extension
Kansas State University Agricultural Experiment Station and Cooperative Extension Service
K-State Research and Extension is an equal opportunity provider and employer. Kansas State University is committed to making its services, activities and programs accessible to all participants. If you have special requirements due to a physical, vision, or hearing disability, contact the Director of Institutional Equity, Kansas State University, 220A Kedzie Hall, Manhattan, KS 66506-0124, (Phone) 785-532-6220; (TTY) 785-532-4807.
Healthy Mexican Food Options

Cinco de Mayo celebrations feature foods with a Mexican influence. Here are tips to help you boost vitamins, minerals, and fiber without sacrificing flavor and enjoyment!

**Tortillas.** Go for corn or whole wheat tortillas. Whole-grain foods can help regulate everything from blood pressure to cholesterol levels to weight.

**Cheese.** If you are making these at home, reduce the amount of cheese and pile on the veggies (peppers, onions, beans, etc.) Use less cheese and choose low-fat or reduced-fat options.

**Load up on veggies.** They bring so much flavor and you'll get more vitamins, minerals, and fiber. Consider

---

**Healthy Quesadilla**

*Makes 8 Servings*

**Ingredients:**

- 8 ounce skinless chicken breast
- ¼ teaspoon cumin
- ¼ teaspoon garlic powder
- ¼ teaspoon oregano
- Dash salt and black pepper
- Olive oil cooking spray
- 1 15-ounce can black beans, drained and rinsed
- 1 small onion, cut into strips
- 1 clove garlic, minced
- 1 tablespoon olive oil
- 1 bell pepper, red or green, cut into strips
- 1 ½ cup reduced fat Mexican blend cheese
- 1 cup salsa or Pico de Gallo
- 8 whole wheat flour tortillas

**Directions:**

1. Wash hands with soap and water.
2. Wash onion and bell pepper by gently rubbing under cold running water. Slice onion and bell pepper.
3. Slice chicken breast in half so you have 2 cutlets. Season chicken with cumin, garlic powder, oregano, salt, and black pepper.
4. Lightly spray a skillet with olive oil. Cook chicken on medium heat, on both sides, until it reaches an internal temperature of 160°F.
5. Remove from heat and cut chicken into strips, set aside.
6. Add 1 tablespoon oil to the skillet. Cook onions and peppers for 2 minutes; add garlic and continue cooking until vegetables are soft. Remove vegetables from pan and set aside.
7. Re-heat skillet on medium heat and lightly spray with olive oil. To make one quesadilla, place a tortilla in the skillet; top with ⅓ cup cheese, and ¼ of the chicken, beans, onions, peppers, and pico de gallo or salsa. Top with another tortilla.
8. When the cheese is melted and the bottom of the tortilla is golden brown, flip the quesadilla. You can do this by putting a plate on top of the quesadilla and flipping it onto the plate, then sliding the un-browned side back onto the skillet.
9. Cook another minute and remove quesadilla with a spatula. Cut into 4 wedges and serve with plain Greek yogurt or reduced fat sour cream.

**Nutrition Information per 1 serving:**

330 calories; 10 g total fat (4 g saturated fat, 0 g trans fat); 44 g carbohydrates; 18 g protein; 4 g fiber; 340 mg sodium; 3 g sugar.

---

spinach, zucchini, sweet peppers, eggplant, squash, and mushrooms. Add pico de gallo and salsa for a fresh flavor boost.

**Pump up the protein.** Beans and lean animal protein are good sources. Black beans are popular and add rich flavor. Chicken breast and seafood are great options.

**Serve a nutritious side.** Chips and salsa are often the go-to, so expand your options. Think about steamed broccoli or spinach salad for a nutritious side. Add fresh veggies for crunch, with a low-fat dip.