

THE BOTTOM LINE

So how much should you walk or do other exercise? Here's what the Centers for Disease Control and Prevention recommends for adults:

To improve your health, do 150 minutes a week of moderate-intensity aerobic activity like:



- walking briskly (3 mph or faster, but not race-walking)
- water aerobics
- bicycling slower than 10 mph
- doubles tennis
- ballroom dancing

..... OR

75 minutes a week of vigorous-intensity aerobic activity like:



- race-walking, jogging, or running
- swimming laps
- singles tennis
- aerobic dancing
- bicycling 10 mph or faster
- jumping rope
- hiking uphill or with a heavy backpack

To improve your health even more, increase your activity to 300 minutes a week of moderate-intensity OR 150 minutes a week of vigorous-intensity activity. If you go beyond either, notes the CDC, "you'll gain even more health benefits."

The CDC also recommends that all adults do "muscle-strengthening activities on 2 or more days a week that work all major muscle groups (legs, hips, back, abdomen, chest, shoulders, and arms)."

Messier and his colleagues have conducted two large, long-term studies in overweight or obese sedentary men and women aged 55 and older with osteoarthritis of the knees.

■ In the **Fitness Arthritis and Seniors Trial (FAST)**, 293 people were randomly assigned to walk for 40 minutes three times a week or to participate in an exercise-free program with information about controlling arthritis.⁸

After 18 months, the walkers reported less pain and less difficulty with the activities of daily living than the non-exercisers. They also walked 53 yards farther during a six-minute test, could get out of a car much faster, and had stronger knees.

■ The **Intensive Diet and Exercise for Arthritis (IDEA)** study tested whether diet plus exercise was better than either one alone. Roughly 400 participants were randomly assigned to do 30 minutes of walking and 20 minutes of strength training three times a week for 18 months, to cut 800 to 1,000 calories a day, or to do both.⁹

At the end of the study, the exercise-plus-diet group had lost an average of 23 pounds. Nearly 40 percent of them—but just 20 percent of the diet-only group and 20 percent of the exercise-only group—reported little or no pain in their knees.

And the people in the exercise-plus-diet group, who averaged around 70 years of age, were walking as fast as

healthy 40-to-60-year-olds, says Messier.

"Increasing your walking speed when you're older is a big deal," he notes, "because it helps maintain your mobility."

4 Improve your mood.

"Walking for exercise can help people who have been diagnosed with mild or moderate depression as much as drugs or psychotherapy sessions," says exercise psychologist **Panteleimon Ekkekakis of Iowa State University.**

In one study, researchers randomly assigned 80 overweight, sedentary people with mild to moderate depression to do aerobic exercise on a treadmill or stationary bicycle or to do stretching exercises.¹⁰

After 12 weeks, those who did the equivalent of brisk walking for roughly 180 minutes a week reported a greater reduction in symptoms than those who exercised for around 80 minutes a week or did stretching. And nearly half of those who spent the most time each week doing aerobic exercise were no longer depressed.

Exercise appears to work in a way similar to antidepressant medications, notes **Ekkekakis.**

The drugs correct an imbalance in levels of serotonin, a chemical messenger that helps keep mood balanced. "In animals where we can observe what's happening in their brains," says **Ekkekakis**, "we see significant increases in serotonin levels with exercise."

And exercise is the surest way to produce brain-derived neurotrophic factor, or BDNF, "which we presume to be therapeutic for depression," says **Ekkekakis.**

Like psychotherapy, exercise also helps patients feel that they have regained some control over their lives. "Individuals who suffer depression and who exercise report feeling greater self-efficacy and empowerment," says **Ekkekakis.**

Since 2010, American Psychiatric Association guidelines have recognized that exercise may be valuable for treating mild depression, notes **Ekkekakis.** "But exercise is largely ignored by psychiatrists and primary care physicians in the United States."