Staying Fit
A Guide to Physical Activity for AFSCME Retirees
How Can Exercise Help Older People Stay Healthy?

Most people know that exercise is good for them and that includes retirees. In fact, research shows that older people in varying physical condition have much to gain from exercise and staying physically active. They also have much to lose if they become physically inactive.

Researchers have found that exercise and physical activity can even improve the health of people who are 90 or older, who are frail, or who have the diseases often associated with aging. In fact, staying physically active and exercising regularly can actually help prevent or delay some diseases and disabilities in older people.

What Kinds of Activities Improve Health and Ability?

Four types of exercises benefit older adults:

**Endurance exercises** increase your breathing and heart rate. They improve the health of your heart, lungs, and circulatory system. Having more endurance not only helps keep you healthier; it can also improve your stamina for the daily tasks you need to do on your own — climbing stairs and grocery shopping, for example. Endurance exercises also may delay or prevent many diseases associated with aging, such as diabetes, colon cancer, heart disease, stroke, and others, and reduce overall death and hospitalization rates.

**Strength exercises** build your muscles and give you more strength to do things on your own. Even very small increases in muscle can make a big difference in ability, especially for frail people. Strength exercises also increase your metabolism, helping to keep your weight and blood sugar in check. That’s important because obesity and diabetes are major health problems for older adults. Studies suggest that strength exercises also may help prevent osteoporosis — the bone loss disease that particularly affects older women.

**Balance exercises** help prevent a common problem in older adults: falls. Falling is a major cause of broken hips and other injuries that often lead to disability and loss of independence. Some balance exercises build up leg muscles; others require you to do simple activities like briefly standing on one leg.

**Flexibility exercises** help keep your body limber by stretching your muscles and the tissues that hold your body’s structures in place. Physical therapists and other health professionals recommend certain stretching exercises to help patients recover from injuries and to prevent injuries from happening in the first place. Flexibility also may play a part in preventing falls.
Which Ones Should I Do, and How Much Should I Do?

Some types of exercise improve just one area of health or ability. More often, though, an exercise has many different benefits.

So, exercise as much as you can, with an eye on increasing both the types of exercises and the amounts of physical activity that you do. Gradually build up to include exercises in every group: endurance, strength, balance, and flexibility.

Now that you’ve read about all the benefits of exercise, we hope you are enthusiastic about getting started. But be careful. Start at a level you can manage and work your way up gradually. If you do too much too quickly, you can damage your muscles and tissues, and that can keep you on the sidelines.

Remember: Your enthusiasm for physical fitness needs to last for the rest of your life. The benefits of exercise and physical activity come from making them a permanent habit.

How much you exercise depends on you and on your unique situation. For some, muscle-building exercise might mean pushing more than 100 pounds of weight at the local gym to keep legs in shape for hiking. For another, it might mean lifting one-pound weights to strengthen arm muscles enough to shower independently. The goal is to improve from wherever you are right now.

Some people are reluctant to start exercising because they are afraid it will be too strenuous. Researchers have found that you don’t have to do strenuous exercises to gain health benefits; moderate exercises are effective, too.

Everyday physical activities can accomplish some of the same goals as exercise. In one study, researchers measured muscle strength in 75-year-olds who regularly did tasks like housework and gardening and in 75-year-olds who were inactive. Five years later they found that the active people kept more of their strength than the inactive people.

Later on, we’ll tell you about specific types of exercises to do and in what amounts. They’ll not only help you maintain your current levels of strength and fitness, but also help you build them up.

Is It Safe for Me to Exercise?

"Too old" and "too frail" are not, in and of themselves, reasons to prohibit physical activity. In fact, there aren’t very many health reasons to keep older adults from becoming more active.

If you’re not physically active now, it’s usually a good idea to seek your doctor’s approval before you start exercising. Your doctor can inform you of safety issues as well as what you can gain from exercise.

Chronic Diseases: Not a Barrier

Chronic diseases may not be curable, but usually they can be controlled with medications and other treatments throughout a person’s life. They are common among older adults and include diabetes, cardiovascular disease (such as high blood pressure), and arthritis, among many others.

In the past, exercise was often discouraged for people with certain chronic conditions, but not any more. In fact, researchers have found that exercise can actually improve many chronic conditions in most older people, as long as it’s done when the condition is under control.
If you have a chronic condition, you need to know how you can tell whether your disease is stable; that’s how you’ll know if exercise is OK for you and when it isn’t.

Chances are good that, if you have a chronic disease, you see a doctor regularly (if you don’t, you should, for many reasons). Talk with your doctor about symptoms that mean trouble — a flare-up, or what doctors call an acute phase or exacerbation of your disease. You should not exercise when warning symptoms of the acute phase of any chronic disease appear. Doing so could be dangerous.

Diabetes is an example of a chronic condition common among older people. Too much sugar in the blood is a hallmark of diabetes. It can cause damage throughout the body. Exercise can help your body use up some of the damaging sugar.

If you have had a heart attack recently, your doctor or cardiac rehabilitation therapist should have given you specific exercises to do. Research has shown that exercises done as part of a cardiac rehabilitation program can improve fitness and even reduce your risk of dying. If you didn’t get instructions, call your doctor to discuss exercise before you begin increasing your physical activity.

For some conditions, vigorous exercise is dangerous and should not be done, even in the absence of symptoms. Be sure to check with your physician before beginning any kind of exercise program if you have:

- **abdominal aortic aneurysm**: a weakness in the wall of the heart’s major outgoing artery.
- **critical aortic stenosis**: a narrowing of one of the valves of the heart.

Most older adults, regardless of age or condition, will do just fine in increasing their physical activity. You might want to show your doctor this book to open the door to discussions about exercise.

**Checkpoints**

You have already read about precautions you should take if you have a chronic condition.

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**Side Leg Raise**

*Strengthens muscles at sides of hips and thighs. Use ankle weights, if you are ready.*

1. Stand straight, directly behind table or chair, feet slightly apart.
2. Hold onto a table or chair for balance.
3. Slowly lift one leg 6-12 inches out to side. Keep your back and both legs straight. Don’t point your toes outward; keep them facing forward.
5. Repeat with other leg.
6. Alternate legs until you have done eight to 15 repetitions with each leg.
7. Rest; then do another set of eight to 15 alternating repetitions.
Other circumstances require caution, too. You shouldn’t exercise until checking with a doctor if you have any of the following:

- chest pain
- irregular, rapid, or fluttery heart beat
- severe shortness of breath
- significant, ongoing, undiagnosed weight loss
- infections, such as pneumonia, with fever
- fever (can cause dehydration and rapid heart beat)
- acute deep-vein thrombosis (blood clot)
- a hernia that is causing symptoms
- foot or ankle sores that won’t heal
- joint swelling
- persistent pain or problems walking after a fall
- certain eye conditions, such as bleeding in the retina or detached retina. Check with a doctor after a cataract or lens implant or after laser treatment or other eye surgery.

**How to Keep Going**

For many older adults, motivation to keep exercising and doing physical activities isn’t a problem. They say that regular physical activity makes them feel so much better that it would be hard to stop.

Others say that, while physical activity makes them feel better, a little extra motivation helps them get going. Motivation is critical because physical activity needs to be a regular, permanent habit to produce benefits.

But don’t get discouraged if you see that your progress has improved by only a few minutes on the treadmill or just one or two lifts of a weight. In terms of real-life benefits, those slight improvements are multiplied many times over as you include them in your everyday activities.

Despite your enthusiasm, there may be times when you’ll need extra motivation. It’s common for beginning exercisers, especially those who are frail, to make fast progress at first. You might get discouraged when the improvements you were making taper off at times.

These leveling-off periods are normal. Often, they mean that it’s time to gradually make your activities more challenging. If you have any doubts about whether you are doing the right things to progress, check with your doctor or a qualified fitness professional.

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**Triceps Stretch**

*Stretches muscles in back of upper arm.*

1. Hold one end of a towel in left hand.
2. Raise and bend left arm to drape towel down back. Keep your left arm in this position, and continue holding onto the towel.
3. Reach behind your lower back and grasp bottom end of towel with right hand.
4. Climb right hand progressively higher up towel, which also pulls your left arm down. Continue until your hands touch, or as close as you can comfortably go.
5. Reverse positions. Repeat each position three to five times.
When you need extra motivation, try the following:

- Ask someone to be your exercise buddy.
- Listen to recorded books or music while exercising.
- Set a goal, and reward yourself when you reach it.
- Think of your exercise sessions as appointments, and mark them on your calendar.
- Keep a record of what you do and of your progress. Understand that there will be times that you don’t show rapid progress and that you are still benefiting from your activities during those times.
- Plan ahead for travel, bad weather, and house guests. For example, an exercise video can help you exercise indoors when the weather is bad.

**Sticking with It**

*Set yourself up to succeed* right from the start. Choose realistic goals, learn to do the exercises correctly and safely, and chart your progress to see your improvement.

When it comes to motivation, the first month is crucial. If you can increase your physical activity for a month and keep going after that, you will have passed a critical landmark. It’s a good sign you’re on your way to making exercise and physical activity regular, lifelong habits.

**Some Exercise Pointers**

Many different physical activities can improve your health and independence. Here are some points to keep in mind as you begin increasing your activity:

- If you stop exercising for several weeks and then return, start out at about half the effort you were doing when you stopped, then gradually build back up. Some of the effects of endurance and muscle-building exercises deteriorate within two weeks if these activities are cut back substantially, and benefits may disappear altogether if they aren’t done for two to eight months.

- When an exercise calls for you to bend forward, bend from the hips, not the waist. If you keep your entire back and shoulders straight as you bend forward, that will help ensure that you are bending the right way, from the hips. If you find your back or shoulders humping in any spot as you bend forward, that’s a sign that you are bending incorrectly, from the waist.

- It’s possible to combine exercises. For example, regular stair-climbing sessions improve endurance and strengthen leg muscles at the same time.

**How Hard Should I Exercise?**

We can’t tell you exactly how many pounds to lift or how steep a hill you should climb to reach a moderate or vigorous level of exercise, because what is easy for one person might be strenuous for another.

But here’s some advice based on scientific research: Listen to your body. The level of effort you feel you are putting into an activity is likely to agree with actual physiology. In other words, if your body tells you that the exercise you’re doing is moderate, measurements of how hard your heart is working
would probably show it working at a moderate level.

One way you can estimate how hard to exercise is by using the Borg Category Rating Scale, pictured here. It was named after Gunnar Borg, the scientist who developed it. The numbers on the left of the scale don’t indicate how many times or how many minutes you should do an activity; they help you describe how hard you feel you are working.

For endurance activities, you should gradually work your way up to level 13 — the feeling that you are working at a somewhat hard level. Some people might feel that way when they are walking on flat ground; others might feel that way when they are jogging up a hill. Both are right. Only you know how hard your exercise feels to you.

Strength exercises are higher on the Borg scale. Gradually work your way up to level 15 to 17 — hard to very hard — to build muscle effectively. You can tell how hard an effort you are making by comparing it to your maximum effort. How hard does your current effort feel compared to when you are lifting the heaviest weight you can lift? Once you start exerting more than a moderate amount of effort in your muscle-building exercises, your strength is likely to increase quickly.

As your body adapts and you become more fit, you can gradually keep making your activities more challenging. You might find, for example, that walking on a flat surface used to feel like you were working at level 13 on the Borg scale, but now you have to walk up a mild hill to feel like you are working at level 13. Later, you might find that you need to walk up an even steeper slope to feel that you are working at level 13.

How to Improve Your Endurance

Endurance exercises are any activity — walking, jogging, swimming, raking — that increases your heart rate and breathing for an extended period.

How Much, How Often?

Build up your endurance gradually. Start with as little as five minutes of endurance activities at a time, if necessary.

Starting out at a lower level of effort and working your way up gradually is especially important if you have been inactive for a long time. **It may take months to go from a very**
long-standing sedentary lifestyle to doing even moderate exercises.

Your goal is to work your way up, eventually, to a moderate-to-vigorous level that increases your breathing and heart rate. It should feel somewhat hard to you (level 13 on the Borg scale).

Once you reach this level, you should build up to a minimum of 30 minutes of endurance exercise on most or all days of the week. More often is better, and every day is best.

If you want, you can divide your exercise into sessions of no less than 10 minutes at a time, as long as they add up to at least 30 minutes. Doing less than 10 minutes at a time won’t give you the desired cardiovascular and respiratory system benefits. (The exception is when you are just beginning to do endurance activities.)

Safety

Endurance activities should not make you breathe so hard that you can’t talk. They should not cause dizziness or chest pain.

Do a little light activity before and after your endurance exercise session to warm up and cool down (example: easy walking). Stretch after your endurance activities, when your muscles are warm.

As you get older, your body is less likely to trigger the urge to drink when you need water. In other words, you may need water, but you won’t feel thirsty. So always be sure to drink liquids when you are doing any activity that makes you lose fluid through sweat. This is important year-round, but is especially important in hot weather, when dehydration is more likely.

If your doctor has asked you to limit your fluids, be sure to check with him or her before increasing the amount of fluid you drink while exercising. Congestive heart failure and kidney disease are examples of chronic diseases that often require fluid restriction.

Older adults can be affected by heat and cold more than other adults. In extreme cases, exposure to too much heat can cause heat stroke, and exposure to very cold temperatures can lead to hypothermia (a dangerous drop in body temperature). If you are exercising outdoors, dress in layers so you can add or remove clothes as needed.
Use safety equipment to prevent injuries. For example, wear a helmet for bicycling, and wear protective equipment for activities like skiing and skating. If you walk or jog, wear stable shoes made for that purpose.

**Progressing**

When you are ready to progress, build up the amount of time you spend doing endurance activities first; build up the difficulty of your activities later. For example, start by gradually increasing your time to 30 minutes over several days to weeks (or even months, depending on your condition) by walking longer distances; then start walking up steeper hills or walking more briskly.

**Examples of Endurance Activities**

Examples of these activities for the average older adult are listed at right.

**Moderate:**
- Swimming
- Bicycling (moving or stationary)
- Gardening (mowing, raking)
- Walking briskly on level ground
- Mopping or scrubbing floors
- Golf, without a cart
- Tennis (doubles)
- Volleyball
- Dancing

**Vigorous:**
- Climbing stairs or hills
- Shoveling snow
- Brisk bicycling uphill
- Tennis (singles)
- Swimming laps
- Cross-country or downhill skiing
- Hiking
- Jogging

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**Knee Flex**

**Do knee flex as part of your regularly scheduled strength exercises.** Add these modifications as you progress: Hold chair with one hand, then one fingertip, then no hands; then do exercise with eyes closed, if steady.

1. Stand straight; hold onto a table or chair for balance.
2. Slowly bend knee as far as possible, so foot lifts up behind you.
3. Hold position for one second.
4. Slowly lower foot all the way back down. Pause.
5. Repeat with other leg.
6. Alternate legs until you have done eight to 15 repetitions with each leg.
7. Rest; then do another set of eight to 15 alternating repetitions.
How to Improve Your Strength

Although they might not notice it as it happens, most people lose 20 to 40 percent of their muscle tissue as they get older. Strength exercise can at least partly restore muscle and strength.

Even very small changes in muscle size can make a big difference in strength, especially in people who already have lost a lot of muscle. An increase in muscle that’s not even visible to the eye can be all it takes to help you up from a chair or climb stairs.

### About Strength Exercises

To do most basic strength exercises, you need to lift or push weights, and gradually you need to increase the weight you use. You can buy hand and ankle weights, or you can use emptied milk jugs filled with sand or water, or socks filled with beans and tied shut at the ends.

There are many strength-exercise alternatives. For example, you can buy a resistance band (it looks like a giant rubber band and stretching it helps build muscle) at a sporting-goods store to do certain types of exercises. Or you can use the special strength-training equipment at a fitness center.

### How Much, How Often?

- Do strength exercises for all of your major muscle groups at least twice a week. But don’t do strength exercises of the same muscle group two days in a row.

- Depending on your condition, you might need to start out using as little as one or two pound weights, or no weight at all. The tissues that bind the structures of your body together need to adapt to strength exercises.

- Start with a **minimum of weight** the first week, and then gradually add weight. Beginning with weights that are too heavy can cause injuries.

- Gradually add a challenging amount of weight in order to benefit from strength exercises. If you don’t challenge your muscles, you won’t benefit from strength exercises.

- When doing a strength exercise, do **eight to 15 repetitions in a row**. Wait a minute; then do another set of eight to 15 repetitions in a row of the same exercise. (Tip: While you are waiting, you might want to stretch the muscle you just worked or do a different strength exercise that uses a different set of muscles.)

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### Desired Range for Heart Rate During Endurance Exercise (beats per minute)

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Take three seconds to lift or push a weight into place; hold the position for one second; and take another three seconds to lower the weight. Don’t let it drop; lowering the weight slowly is very important.

It should feel somewhere between hard and very hard (15 to 17 on the Borg scale) for you to lift or push the weight. It should not feel very, very hard. If you can’t lift or push a weight eight times in a row, it’s too heavy for you. If you can lift a weight more than 15 times in a row, it’s too light for you.

Stretch after strength exercises, when your muscles are warmed up. If you stretch before strength exercises, be sure to warm up your muscles first (through light walking and arm pumping, for example).

Safety

Don’t hold your breath during strength exercises. Breathe normally. Holding your breath while straining can cause changes in blood pressure. This is especially true for people with cardiovascular disease.

If you have had hip surgery or replacement, check with your surgeon before doing lower-body exercises; don’t cross your legs or bend your hips past a 90-degree angle.

Avoid jerking or thrusting weights into position. That can cause injuries. Use smooth, steady movements.

Avoid “locking” the joints in your arms and legs in a tightly straightened position. (Tip on how to straighten your knees: Tighten your thigh muscles. This will lift your kneecaps and protect them.)

Breathe out as you lift or push, and breathe in as you relax. For example, if you are doing leg lifts, breathe out as you lift a leg, and breathe in as you lower it.

Muscle soreness lasting up to a few days and slight fatigue are normal after muscle-building exercises, but exhaustion, sore joints, and unpleasant muscle pulling aren’t. The latter symptoms mean you are overdoing it.

Progressing

Here is an example of how to progress gradually: Start out with a weight that you can lift only eight times. Keep using that weight until you become strong enough to lift it 12 to 15 times. Add more weight so that, again, you can lift it only eight times. Use this weight until you can lift it 12 to 15 times, and then add more weight. Keep repeating.

How to Improve Your Balance

Each year, U.S. hospitals have 300,000 admissions for broken hips, and falling is often the cause of those fractures. Balance exercises can help you stay independent by helping you avoid the disability — often permanent — that may result from falling.

As you will see, there is a lot of overlap between strength and balance exercises; very often, one exercise serves both purposes. Just do your regular strength exercises and they will improve your balance at the same time. Also try knee-extension exercises, which can help you keep your balance by increasing muscle strength in your upper thighs.
Progressing

These exercises can improve your balance even more if you do the following: Strength/balance exercises usually require you to hold onto a table or chair for balance. Hold onto the table with only one hand. As you progress, try holding on with only one fingertip. Next, try these exercises without holding on at all. If you are very steady on your feet, move on to doing the exercises using no hands, with your eyes closed. Have someone stand close by if you are unsteady.

If you can’t do endurance or strength exercises for some reason, and stretching exercises are the only kind you are able to do, do them at least three times a week, for at least 20 minutes each session.

Do each stretching exercise three to five times at each session.

Slowly stretch into the desired position, as far as possible without pain, and hold the stretch for 10 to 30 seconds. Relax, then repeat, trying to stretch farther.

Safety

Always warm up before stretching exercises. (Do them after endurance or strength exercises, for example. Or, if you are doing only stretching exercises on a particular day, do a little bit of easy walking and arm-pumping first.) Stretching your muscles before they are warmed up may result in injury.

Stretching should never cause pain, especially joint pain. If it does, you are stretching too far, and you need to reduce the

How to Improve Your Flexibility

Stretching exercises can improve your flexibility — the freedom of movement to do the things you need to do and the things you like to do.

How Much, How Often?

Stretch after you do your regularly scheduled strength and endurance exercises.

Arm Raise

Strengthens shoulder muscles.

1. Sit in armless chair with your back supported by back of chair.
2. Keep feet flat on floor and as wide as your shoulders.
3. Hold hand weights straight down at your sides, with palms facing inward.
4. Raise both arms to side, shoulder height.
5. Hold the position for one second.
7. Repeat eight to 15 times.
8. Rest; then do another set of eight to 15 repetitions.
stretch so that it doesn’t hurt. Mild discomfort or a mild pulling sensation is normal.

- Never “bounce” into a stretch; make slow, steady movements instead. Jerking into position can cause muscles to tighten, possibly resulting in injury.

- Avoid “locking” your joints into place when you straighten them during stretches. Your arms and legs should be straight when you stretch them, but don’t lock them in a tightly straight position. You should always have a very small amount of bending in your joints while stretching.

**About Floor Exercises**

Many exercises are done on the floor and stretch some very important muscle groups. If you are afraid to lie on the floor to exercise because you think you won’t be able to get back up, consider using the buddy system to do these. Find a buddy who will be able to help you.

Knowing the right way to get into a lying position on the floor and to get back up also may be helpful. If you have had a hip replacement, check with your surgeon before using the following method. If you have osteoporosis, check with your doctor first.

**To get into a lying position:**

Stand next to a very sturdy chair that won’t tip over (place the chair against a wall for support if needed). Put your hands on the seat of the chair. Lower yourself down on one knee. Bring the other knee down. Put your left hand on the floor and lean on it as you bring your left hip to the floor. Your weight is now on your left hip. Straighten your legs out. Lie on your left side. Roll onto your back. (*Note: You don’t have to use your left side. You can use your right side, if you prefer.*)

**To get up from a lying position:**

Roll onto your left side. Use your right hand, placed on the floor at about the level of your ribs, to push your shoulders off the floor. Your weight is on your left hip. Roll forward, onto your knees, leaning on your hands for support. Lean your hands on the seat of a chair. Lift one of your knees so that one leg is bent, foot flat on the floor. Leaning your hands on the seat of the chair for support, rise from this position. (*Note: You don’t have to use your left side; you can reverse positions, if you prefer.*)

**Want to Learn More?**

This publication for AFSCME retirees is based on an 80-page book called *Exercise: A Guide from the National Institute on Aging*. NIA is a government agency – a division of the National Institutes of Health – that conducts scientific research on the nature of aging and issues affecting the health of older Americans.

NIA wants to help YOU stay healthy and physically fit. That’s why the agency will be happy to send you a copy of its book free of charge. It contains lots of information on specific exercises and other fitness tips. To get your copy, call NIA at 1-800-222-2225; or write NIA Information Center, P.O. Box 8057, Gaithersburg, MD 20898; or log onto [www.nia.nih.gov](http://www.nia.nih.gov). The book is available in both English and Spanish.

Also, NIA has produced a companion video to its exercise book that’s available for $7 (book included). You can obtain it by sending your check to the address above or by logging on to the Web site (where you can pay by credit card).
**Weekly Schedule**

Leave this form blank so you can copy it as needed. Write in the exercises and activities you plan to do. Create a schedule you think you really can manage. You can change your plan as your fitness improves and you are able to do more.

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