



Basic Exercises for Pilots

As we age, our body's physical make-up starts to dramatically change. Our muscle mass decreases at a rate of 3 percent to 5 percent per decade after age 40, and the decline increases to 1 percent to 2 percent per year after age 50. Endurance, flexibility and balance also decrease as we age. The good news is that exercise can increase each of these!

***Please consult your physician before beginning any diet and exercise program.**



Endurance and aerobic exercises

Endurance/aerobic exercises increase the overall health of your heart, lungs, and circulatory system. Having greater endurance can improve your stamina for the tasks you need to do while flying.

It's recommended that you participate in some type of endurance/aerobic activity for at least 30 minutes on most days of the week. Types of activities include walking, running, biking, and swimming. Biking and swimming are recommended for those that may have knee and back pain. If you're unable to fit in one 30-minute time period, or if you get tired, try breaking it up into three 10-minute intervals throughout the day.

Strength and resistance exercises

Strength/resistance exercises build your muscles and also increase your metabolism, helping to keep your weight and blood sugar in check. Studies suggest that strength exercises may also help prevent osteoporosis.

Try to perform resistance exercises two to three days per week with at least 24 hours of rest between sessions. Work at an intensity that feels somewhat hard but is still achievable. Start out slowly and work up to 2 to 3 sets of 10 to 15 repetitions. Examples of total body resistance exercises include squats, pushups, bicep curls, tricep extensions, front shoulder raises, and planks.

NOTE:

This course is for informational purposes only: It is not intended as a substitute for professional medical advice. Always seek the advice of a qualified health care provider before starting any exercise routine or program.

From the online interactive course *Aging Gracefully, Flying Safely*
www.airsafetyinstitute.org/aging

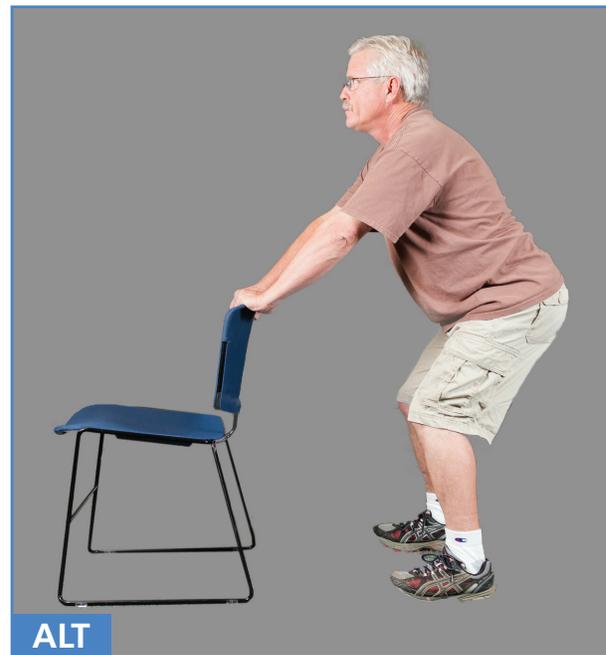
Squats:

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- Stand with your feet shoulder-width apart.
- Hold your arms straight out in front of you.
- Think as though you were going to sit in a chair. Bend at your hips by pointing your tailbone to the wall behind you.
- Keep your chin forward, your back straight, and your knees behind your toes.
- Pause when your thighs are parallel to the ground, then push up through your heels to return to the starting position.
- Don't lock your knees at the top of the move; keep them slightly bent.

If you find that you can't maintain balance while performing the squat above, you can use the back of a chair to help.

- Make sure the chair is on a level surface before starting.
- Stand with your feet shoulder-width apart facing the chair, and place your hands on the top of the back.
- Slowly lower yourself into a squat by pushing your hips toward the back, and slowly rising back to a standing position.
- As you become stronger, try using only one hand on the chair, eventually taking both hands off to complete the squat.



Pushups:

- Lie face down on the floor, hands slightly wider than your shoulders and palms pressing into the floor. Keep your feet together and parallel to each other.
- Press your body up through the palms of your hands, straightening your arms while keeping your body straight as a board as you rise.
- At the top, pause slightly, then lower your chest to the floor and repeat.
- It's okay if you can't get your chest close to the floor to start. With each set that you do you will get stronger allowing you to go lower into the move.

If pushups on your toes are too difficult and you feel a strain in your lower back, simply drop your knees to the floor. Once you've mastered these, try moving to your toes.

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Bicep Curls:

You will need hand weights, an elastic band, or even water bottles for this exercise. This exercise can be done seated or standing.

- Stand with your feet shoulder-width apart with your palms facing forward and arms straight down at your sides.
- Slowly bend your elbows so your hands rise to meet your shoulders.
- Be sure to keep your back still and your elbows locked at your sides during this exercise.

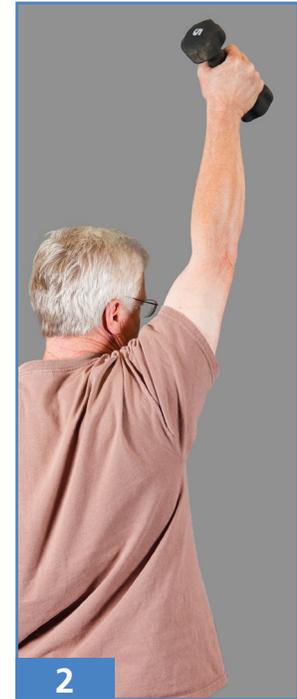


Tricep Extension:

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You will need hand weights, an elastic band, or even water bottles for this exercise. This exercise should be done with one arm at a time and can be done seated or standing.

- Place a dumbbell in one of your hands and raise that arm above your head with your palm facing in.
- With the other hand, support your raised arm at the elbow.
- Take the arm with the dumbbell and bend it back at the elbow so that the weight approaches your shoulder.
- Slowly raise your arm back up to the starting position, and be sure to repeat on each side.

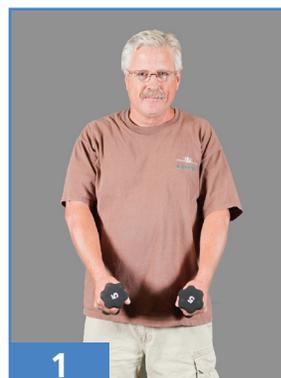
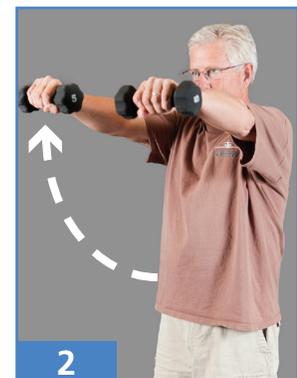


Front & Lateral Shoulder Raises:

These two exercises can be done seated or standing.

- Begin with a dumbbell in each hand with your arms at your sides.
- Raise your extended arms out in front of you to shoulder height, then lower back down.

For the lateral raise, lift your arms out to your sides to shoulder height, then lower them back down. Be sure to do these two movements in a slow and controlled manner.



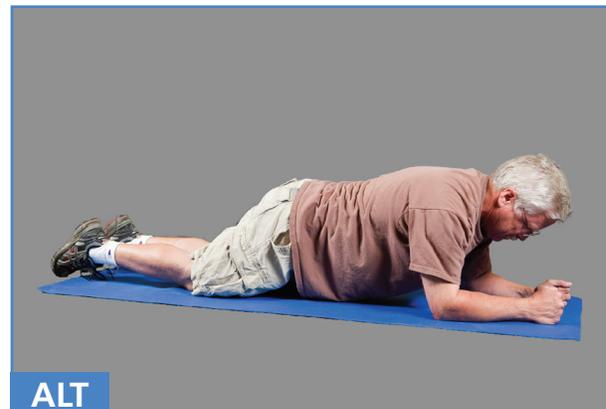
Planks:

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The plank is a great way to build endurance in the abs and back, as well as the stabilizer muscles.

- Lie face down on a mat resting on the forearms.
- Push off the floor, raising up onto the toes and resting on the elbows.
- Keep your back flat; it should be in a straight line from head to heels.
- Tilt your pelvis and contract your abdominals to prevent your rear end from sticking up in the air or sagging in the middle.
- Hold for 20 to 60 seconds, lower and repeat for 3 to 5 reps.

This exercise can also be performed on the knees if you experience any lower back pain.



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