



# Desk**Fit**

20 ESSENTIAL DESK EXERCISES YOU  
CAN DO *WITHOUT* LEAVING YOUR  
OFFICE OR *HOME* WORKSPACE

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The U.S. Department of Health and Human Services' Physical Activity Guidelines for Americans (second edition) recommends that all adults need at least 150 to 300 minutes of moderate-intensity aerobic (cardiovascular) activity and at least two days of muscle-strengthening activity each week. The foremost guideline for all adults is to sit less and move more. There is a strong correlation between sedentary behavior and increased risk of all causes of mortality, including heart disease, cancer, and numerous metabolic diseases. Regular physical activity helps to manage chronic health conditions, such as hypertension, diabetes, depression, arthritis, dementia, and obesity. It provides long-term benefits for reducing anxiety, improving sleep and cognition, lowering risk of injuries, and maintaining a healthy weight.

According to the Centers for Disease Control and Prevention, one in four adults sits more than 8 hours a day, and half of Americans do not meet weekly physical activity guidelines. Many jobs are considered sedentary, and employees frequently work from home, so it can be challenging to sit less and move more.



# DESKFIT

Research shows that working professionals who exercise during the day feel healthier and experience positive associations with job performance, including improvement in time management skills and mental performance. Employees are more likely to demonstrate better moods, increased motivation, greater stamina to complete work, less stress, and better interactions with coworkers.

## Ten Tips To Stay Healthy at Work or While Working from Home:

- 1 Ensure that your workspaces in the office and at home are ergonomically set up to prevent injuries.
- 2 Take a break from sitting every 30 minutes. A brief 5–10-minute break can help rejuvenate your mind and prevent chronic pain.
- 3 Walk and use the stairs whenever possible.
- 4 Alternate sitting and standing throughout the day.
- 5 Offer walking meetings as alternatives to sitting in conference rooms.
- 6 Schedule time to exercise daily as a priority—as you would plan other important work responsibilities.
- 7 Break up physical activity into smaller durations of time—such as 10 minutes before work, 10 minutes at lunch, and 10 minutes after work—if longer durations of exercise do not fit within your schedule.
- 8 Incorporate microbreaks of 1–2 minutes every 30–60 minutes to stand up and stretch your entire body.
- 9 Use a hands-free headset for your phone so you can move around easily.
- 10 Eat nutritious meals and keep healthy snacks available.

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For further information or assistance with staying healthy, please contact the NASA Headquarters Fitness Center.

# 9 Ways Excessive and Improper Sitting Can Harm You

## Head

Sitting for long periods of time can cause blood clots, which can travel to the brain causing a stroke.

## Lungs

You are twice as likely to develop a pulmonary embolism or blood clot if you sit most of the day.

## Arms

The reduction of physical activity leads to hypertension or high blood pressure.

## Stomach

Excessive sitting contributes to obesity and colon cancer. Enzymes in the blood vessels of muscles responsible for burning fat shut down, leading to the disruption of the body's method of metabolizing fuels.

## Feet

Numbness in the feet can be caused by poor circulation. It can also cause nerve damage or pressure on nerves when you sit for long periods.

## Neck

Fluid retained in the legs during the day moves to the neck and contributes to sleep apnea. Neck muscles are stressed, leading to pain.

## Heart

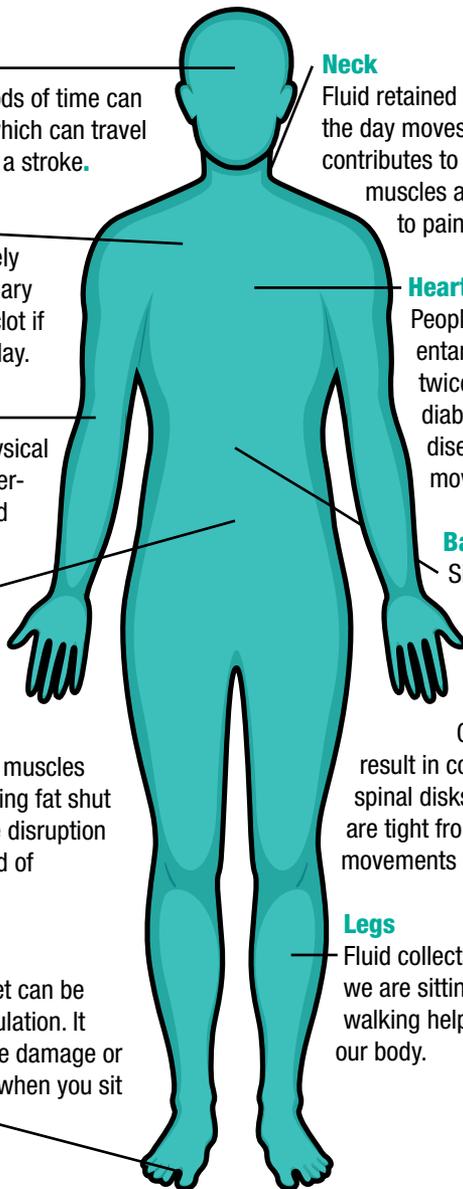
People who live a sedentary lifestyle are up to twice as likely to develop diabetes and heart disease than those who move frequently.

## Back

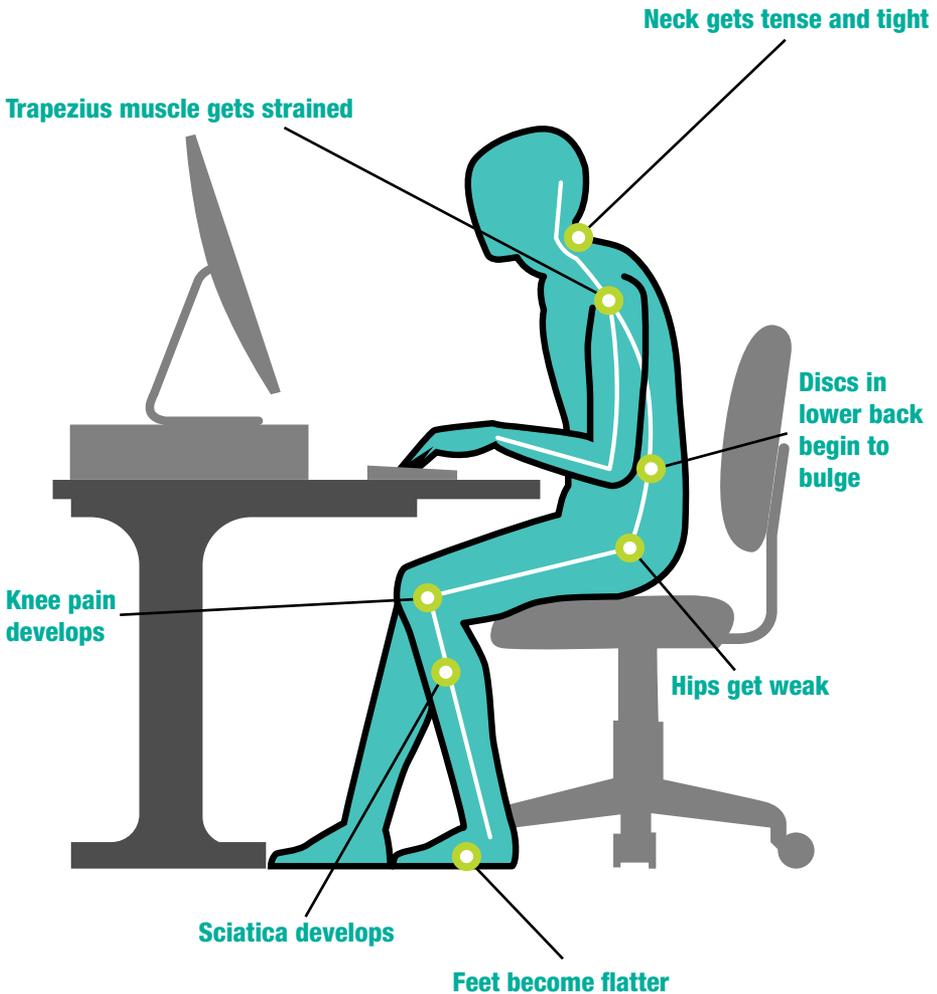
Sitting for long periods of time places a high amount of pressure on the spine. Over time, sitting can result in compression of the spinal disks. Because muscles are tight from pressure, sudden movements can lead to injury.

## Legs

Fluid collects in the legs while we are sitting. Standing up and walking helps pump it through our body.



# How Excessive and Improper Sitting All Day Affects the Body





**STAND UP** for your **HEALTH** and  
**BREAK UP** your extended sitting with...



**DESKFIT**

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# DESKFIT EXERCISES

## Program Recommendations

\*Stretches and exercises may be completed any time during the day. They do not need to be completed all at once. If it is more convenient for you to spread the stretches or exercises throughout the day, that is effective for improving health.

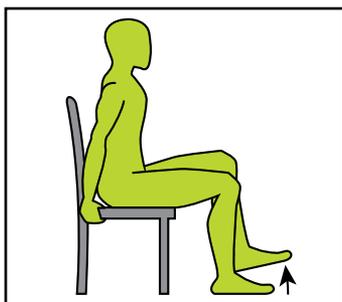
\*For a suggested program, aim to complete the exercises on Monday, Wednesday, and Friday and the stretches on Tuesday and Thursday one week. Then, alternate to stretches on Monday, Wednesday, and Friday and exercises on Tuesday and Thursday the following week—and repeat the cycle.

\*Take a break from prolonged sitting every 30 minutes.

\*A 5-10 minute break will recharge your mind and prevent chronic pain. Focus on short micro breaks of 1-2 minutes every 30-60 minutes to stand up and stretch your body.

\*Alternate sitting and standing throughout the day.

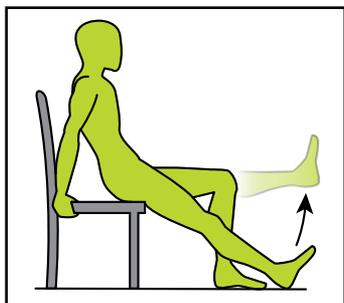
For further assistance with exercises and stretches, please contact the NASA Headquarters Fitness Center.



## SEATED MARCHES

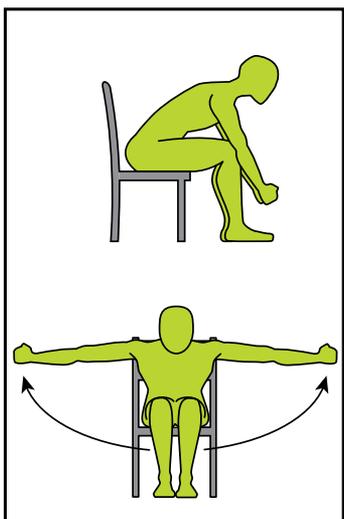
Sit on the chair with your back straight. Bend your legs at the knees and “run” on the spot with short, quick steps as fast as you can for 15–20 seconds.

# EXERCISES



## SEATED LEG EXTENSIONS

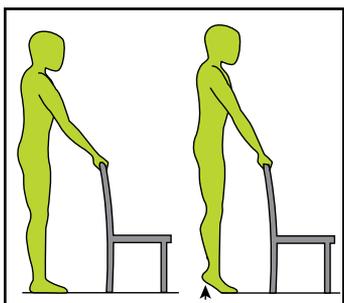
Sit on the edge of your chair with your arms by your sides. Extend your right leg out straight and flex your foot so that just the right heel is on the floor (keeping your foot flexed engages the muscles in the shin and ankle). Lift your leg up as high as you can without rounding your back. Hold for two counts, then lower. Repeat with the other leg. Perform 10 reps on each leg.



## SEATED REVERSE SHOULDER FLY

Sit on the edge of the chair and lean forward while keeping your lower back naturally arched. Your palms should be facing each other. Raise your arms straight out from your sides. Pause and then slowly return to the starting position. Repeat the exercise 15 times.

Prolonged sitting increases risk of spinal, shoulder, carpal tunnel, and leg disorders

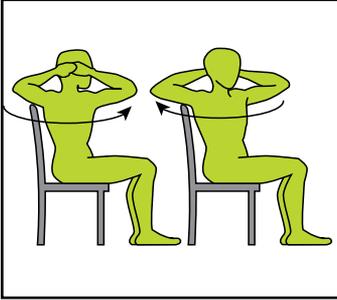


## STANDING CALF RAISES

Stand up behind your chair and hold on for support. Raise your heels off the floor until you are standing on your toes. Slowly lower yourself back to the floor.

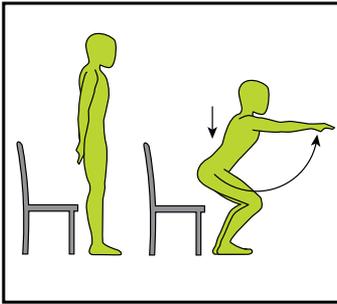
Perform 12–15 times.

# EXERCISES



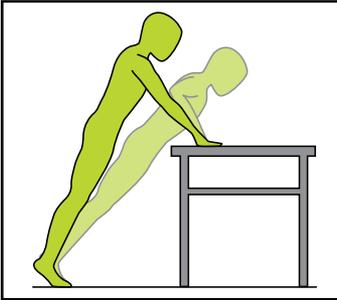
## SEATED TORSO TWISTS

Sit on the edge of the chair, bend your legs at the knees, and lean slightly back without rounding your spine. Bend your arms so your elbows are level with the bottom of your ribcage. Pull your navel in and twist slowly to the left. Inhale and twist to the right. Repeat the exercise dynamically 20 times total.



## CHAIR SIT AND STAND

Stand in front of the chair with your legs shoulder-width apart. Squat down like you are sitting on the chair but without actually touching it. Maintain a proper position: back straight, knees above the feet, weight on the heels. Straighten your legs to go back to the starting position. Repeat the movement 10–15 times.



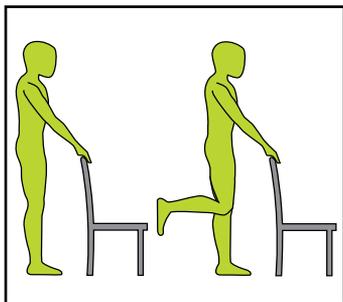
## DESK PUSH-UPS

While standing, position yourself a few feet from your desk. Keep your feet together. Then, put your palms on the edge of your desk, about a shoulder width away from each other. Lower down to the edge of the desk, and push back to the starting position. Perform 8–15 times. To modify, perform push-up against a wall or on the floor.

“Sitting for more than 3 hours per day increases risk for all-cause mortality deaths.”

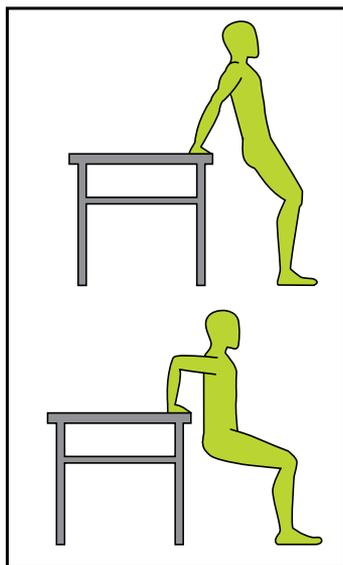
—Van Uffelen J.G. et al., 2010; Patel et al., 2010

# EXERCISES



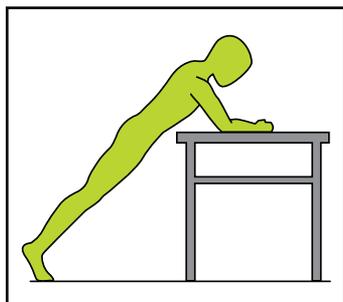
## STANDING LEG CURL

Stand behind your chair and hold onto it for support. Keep your body straight and firm. Start by raising one foot up to your backside and then lowering it down. Repeat the process for 10–15 times, and then switch to the other leg and repeat.



## DESK DIP

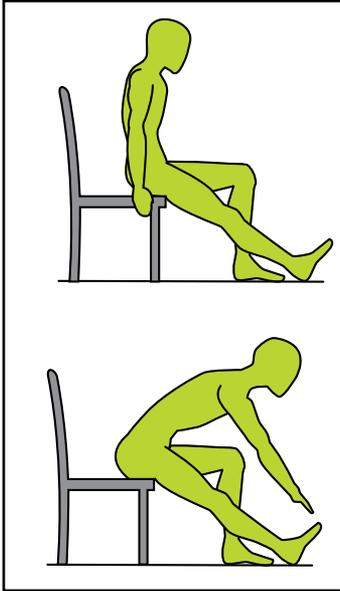
Put your hands to the edge of the desk, shoulder-width apart. Slide your bottom off the desk and hold yourself up with your arms straight. While keeping your back close to the desk, slowly bend at the elbows and go as low as you can. Return to the starting position. Repeat the exercise 10–15 times.



## DESK PLANK

Place your forearms on the desk, hands touching each other and relaxed. Extend your legs with your toes on the floor. Contract your abdominal muscles. Make sure that you maintain a straight line from your head to toes without lifting or sinking your hips. Hold the position for 10–15 seconds.

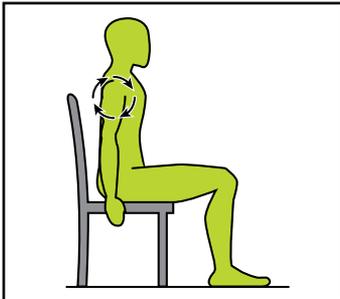
# STRETCHES



## SEATED HAMSTRING STRETCH

Sit in your chair with both feet on the ground, then extend one leg outward. Reach toward your toes.

Hold stretch for 10–15 seconds while taking deep breaths. Repeat on the other leg for two sets.



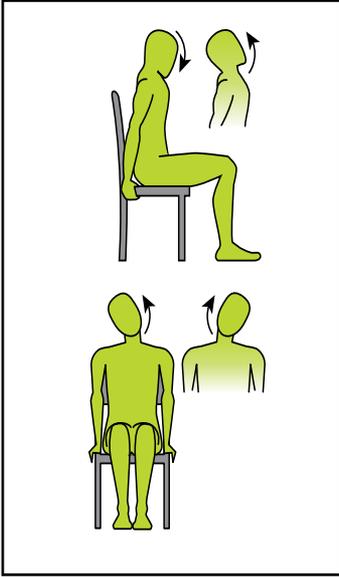
## SEATED SHOULDER ROLL

Raise both shoulders up toward your ears, then slowly roll them backward. Repeat, rolling forward. Sit tall and do not allow your upper back to round.

Complete this two times in both directions.

Sitting too much increases cholesterol and accelerates weight gain.

# STRETCHES



## SEATED NECK STRETCH

Sit tall on your chair, feet flat on the floor, without leaning into your chair back.

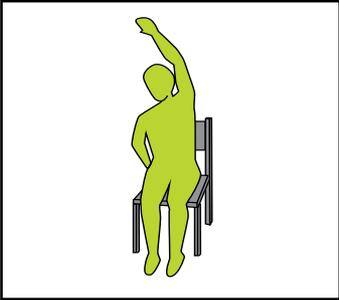
Relax your chin down toward your chest and hold.

Lift your chin up toward the ceiling and hold.

Bring your head forward and tilt your right ear toward your right shoulder and hold.

Bring your head up and tilt to the opposite (left) side and hold.

Breathe deeply throughout your stretches for 10–15 seconds for each.



## SEATED LEAN STRETCH

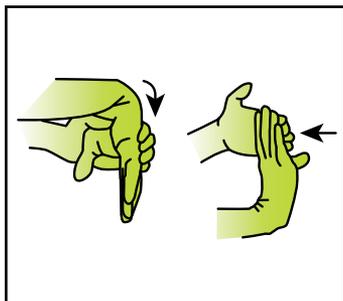
Sit up tall and raise your arm. Bend toward your left side reaching with your right hand overhead and hold for 10–15 seconds.

Repeat to other side for two sets.

“For people who sit most of the day, their risk of heart attack is about the same as smoking.”

—Martha Grogan, MD,  
a Mayo Clinic cardiologist in Wall Street Journal  
article on beating heart attacks

# STRETCHES

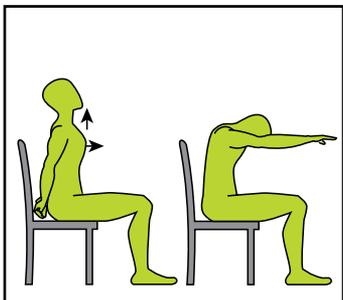


## WRIST/FOREARM STRETCH

Stretch your arm out in front of you. Slowly, point your fingers down until you feel a stretch. Use the other hand to gently pull the raised hand toward the body. Hold this position for 3–5 seconds.

Point your fingers toward the ceiling until you feel a stretch. Use the other hand to gently pull the raised hand toward the body. Hold this position for 3–5 seconds.

Repeat this stretch two times in each direction.



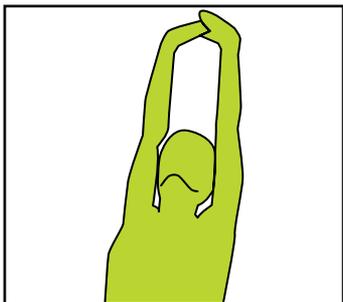
## SEATED CHEST AND BACK STRETCH

Clasp your hands behind your lower back. Push your chest outward, and raise your chin.

Hold this stretch for 10–15 seconds with deep breaths. Perform two sets.

Hold your arms out straight in front of you, palms facing down. Lower your head in line with your arms, and round your upper back while looking down toward the floor.

Hold this stretch for 10–15 seconds with deep breaths. Perform two sets.

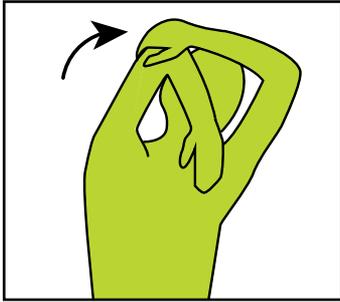


## SEATED CEILING REACH

Clasp your hands together above your head with your palms facing up toward the ceiling. Push your arms up, stretching upward.

Hold this stretch for 10–15 seconds while taking deep breaths. Perform two sets.

# STRETCHES

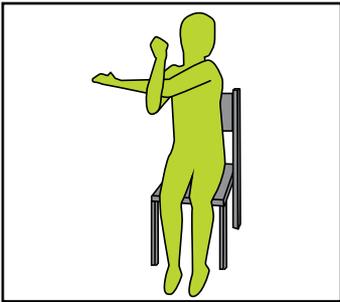


## SEATED TRICEP STRETCH

Raise one arm and bend it so that your hand reaches to touch the opposite shoulder blade. (It's okay if you can't reach it.)

Use your other hand and pull your elbow toward your head.

Hold this stretch for 10–15 seconds while taking deep breaths. Repeat on the other side for two sets.

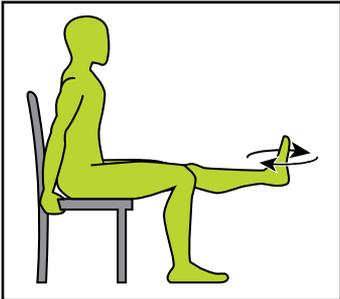


## SEATED SHOULDER PULL

Sit tall on your chair, feet flat on the floor, without leaning into your chair back. Engage the abs and bring your left arm across your chest, holding it below the elbow.

Keep the shoulders relaxed, down and away from your ears.

Hold this stretch for 10–15 seconds with deep breaths. Repeat with the other arm for two sets.



## SEATED ANKLE ROLL

While seated, extend one leg until your foot is off the floor and slowly rotate your foot clockwise 10 times. With the same foot, repeat the exercise in a counterclockwise motion.

Switch to other the foot and repeat.

**Consult your physician before participating in any exercise program.**

**For more information, contact the  
NASA Headquarters Fitness Center  
at 202-358-0138 or  
<http://fitnesscenter.hq.nasa.gov/>**

