

DREAM INITIATIVE

SESSION 4: HEALTH EFFECTS OF DIABETES



Review: Question 1

Q 1) How much weekly exercise is recommended for adults?

- a) At least 50 minutes per week
- b) At least 100 minutes per week
- c) At least 150 minutes per week

Answer

Q 1) How much weekly exercise is recommended for adults?

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- b) At least 100 minutes per week
- c) At least 150 minutes per week**

Review: Question 2

Q 2) Which one below is not a healthy way to lose weight?

- a) Be more physically active
- b) Eating foods with fewer calories
- c) Skipping meals

Answer

Q 2) Which one below is not a healthy way to lose weight?

- a) Be more physically active
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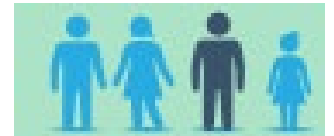
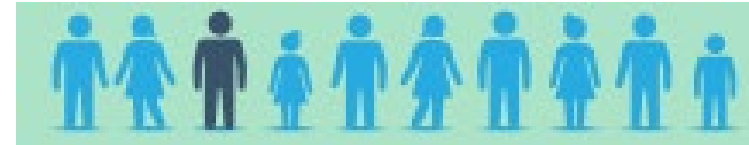
Session Objectives

- ▶ Understand diabetes related health conditions
- ▶ Learn how to make a diabetes care plan
- ▶ Learn how to correctly take your medications
- ▶ Learn about how diabetes may increase your chances to develop heart disease and stroke

Diabetes & Heart Disease in the United States

Diabetes

- ▶ About 1 in every 10 people has Diabetes
- ▶ Among South Asians, approximately 1 out of 4 has Diabetes



Heart Disease

- ▶ Heart disease is the leading cause of death.
- ▶ 1 in every 4 deaths is caused by heart disease.
- ▶ South Asians are also more likely to develop heart disease than other racial/ethnic groups.

Why is it so important to take care of your diabetes?

- ▶ Diabetes affects every part of your body.
- ▶ Managing diabetes requires **several doctors visits a year**.
- ▶ Healthcare costs are more than **twice as expensive** for people with diabetes compared to people without diabetes.
- ▶ Managing your diabetes can prevent further complications.

Diabetes-related eye problems

- ▶ Clouding of the eye's lens
- ▶ Pressure inside the eyeball that can lead to loss of vision
 - ▶ Prevent glaucoma by exercising regularly, eating a healthy diet and limiting caffeine
- ▶ **Diabetic Retinopathy** – next slide!

What is Diabetic Retinopathy?

- ▶ Damage to the blood vessels in the retina (back of the eye).
- ▶ At first you may not notice changes to your vision but over time, it can cause vision loss.



Normal Vision



Vision with diabetic retinopathy

Signs of Diabetic Retinopathy

You may not have any signs of diabetes retina damage, or you may have one or more signs:

- ▶ Blurry or double vision
- ▶ Rings, flashing lights, or blank spots
- ▶ Dark or floating spots
- ▶ Pain or pressure in one or both of your eyes
- ▶ Trouble seeing things out of the corners of your eyes



Diabetes and your nerves

What are nerves?

Nerves send messages from one part of your body to another. Your skin has nerves that tell your brain about pain, heat or cold or if something is soft, sticky or sharp.



Diabetes can damage your nerves:

- ▶ Your arms, hands, legs, or feet feel may feel numb.
 - ▶ You might not be able to feel pain, heat, or cold when you should.
 - ▶ A sore or cut on your foot may get worse because you do not know it is there, and may lead to infection.
- ▶ You may feel shooting pains or burning or tingling, like “pins and needles.”



Ways to Prevent Nerve Damage

- ▶ Manage your A1c.
- ▶ Don't smoke.
- ▶ Take care of your feet. Tell your doctor about any problems you have with:
 - ▶ your hands, arms, feet, legs,
 - ▶ your stomach, bowels, or bladder
- ▶ Ask your doctor if he or she recommends compression socks to improve your blood flow.



Keeping your feet healthy

- ▶ Have a foot doctor (podiatrist) or PCP check your feet once a year
- ▶ Check your feet every day
 - ▶ Look for calluses, cuts, sores, blisters, red spots or swelling
 - ▶ Use a mirror to check the bottoms of your feet
- ▶ Wash your feet everyday
 - ▶ Use warm water (not hot) to wash your feet
 - ▶ Do not soak your feet; dry your feet well



Try to check your feet every evening.



Swollen feet

Keeping you feet healthy

- ▶ Keep skin soft by rubbing lotion
- ▶ Do not walk barefoot and wear shoes that fit well
- ▶ Protect your feet from hot and cold
- ▶ Keep the blood in your feet flowing
 - ▶ Put your feet up on a chair, couch, or footrest when sitting
 - ▶ Wiggles your toes and move ankles up and down for 5 minutes, 2 or 3 times a day.

Diabetes and Your Kidneys

- ▶ Diabetes can lead to kidney damage, kidney disease, or kidney failure.
- ▶ Damaged kidneys cannot clean out waste and extra water, so waste build up in your blood instead of leaving the body through urine.
- ▶ Control your A1c and blood pressure!



Where are your kidneys?

Signs of Kidney Infection

See a doctor right away if you have these symptoms:

- ▶ Pain or burning when you urinate
- ▶ A frequent urge to go to the bathroom
- ▶ Urine that looks cloudy or reddish
- ▶ Fever or a shaky feeling
- ▶ Pain in your back or on your side below the ribs

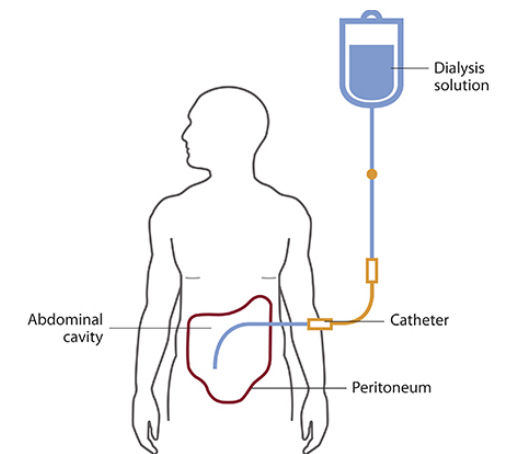
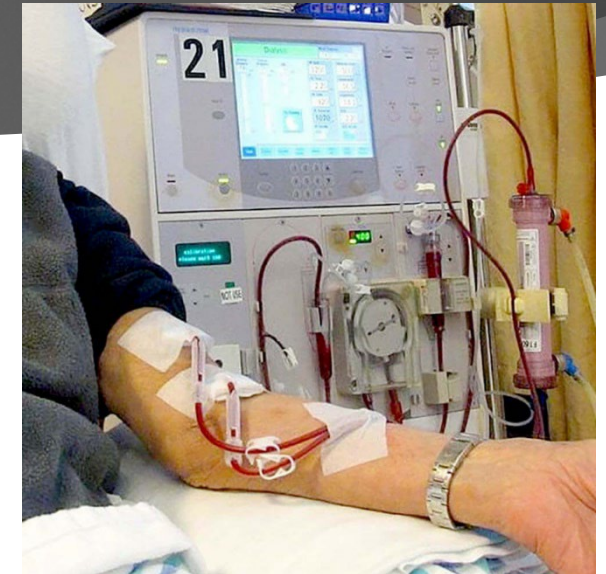


Cloudy Urine

Early kidney disease may not have signs or symptoms. Your doctor will check your urine and blood to check your kidney function at least once per year.

Kidney Failure and Dialysis

- ▶ Once the kidney fails, you will need dialysis for your whole life unless you get a kidney transplant
- ▶ Dialysis removes waste and extra water so they don't build up in your body
- ▶ Dialysis can be done at a hospital or at a dialysis unit outside of a hospital



Diabetes and Your Teeth

- ▶ Diabetes can lead to infections in your mouth:
 - ▶ Avoid smoking or tobacco use
 - ▶ If you wear any type of denture, clean it each day
 - ▶ Brush twice a day with a soft brush and clean between your teeth daily
 - ▶ See your dentist for regular checkups
- ▶ Watch a video on how to brush your teeth properly:
<https://www.youtube.com/watch?v=xm9c5HAUBpY>



Diabetes and Your Gums

- ▶ Healthy gums are pink and firm, are tightly attached to the teeth, and don't usually bleed when you brush your teeth .
- ▶ Gum disease develops when the teeth are not brushed well, making gums look inflamed and swollen, and may bleed when you brush your teeth.



Healthy teeth



Bleeding gums



Severe gum disease

Checking your blood glucose

- ▶ Wash hands with warm water and dry well. Massage hands to get blood into your finger.
- ▶ Use a lancet device to prick your finger. From base of finger, squeeze a small amount of blood into test strip. Place the strip in the meter.
- ▶ After a few seconds, reading will appear. Record your results in a tracking tool(journal log, phone application)
- ▶ Dispose of lancet and strip



Suggested blood glucose levels

- ▶ American Diabetes Association suggests:
 - ▶ **Before a meal** 80–130 mg/dl
 - ▶ **1-2 hours after beginning of the meal** Less than 180 mg/dl

*Targets differ based on age and health, discuss with your target glucose ranges with your doctor

Low blood sugar

- ▶ Can be very dangerous and cause confusion, fainting, or seizures.
 - ▶ Drink a $\frac{1}{2}$ cup of juice or eat a few hard candies or glucose tablets if you have these symptoms.
- ▶ To prevent low blood sugar:
 - ▶ Do not skip meals.
 - ▶ Take any medication as directed by your doctor.

Signs of low blood sugar

- Nausea or hunger
- Weakness or fatigue
- Blurred vision
- Nervousness or anxiety
- Dizziness and difficulty concentrating
- Shakiness
- Sweating, chills, or clamminess
- Irritability or impatience

Experiencing high blood sugar?

- ▶ If your reading is more than 300 → notify your doctor
- ▶ If your reading is more than 200 + you experience nausea, weakness or dizziness → notify your doctor
- ▶ If your reading is 180-300 + you do **not** have any symptoms → talk to your CHW

Diabetes and Heart Health

- ▶ The longer you have diabetes, the higher the risk you will develop heart disease, heart attack, and stroke.
- ▶ To lower your chances of developing heart disease, you must manage your **blood sugar, blood pressure, and cholesterol.**

→ Heart Disease and Diabetes: Review your risk factors and manage them during your 1v.1 with your CHW

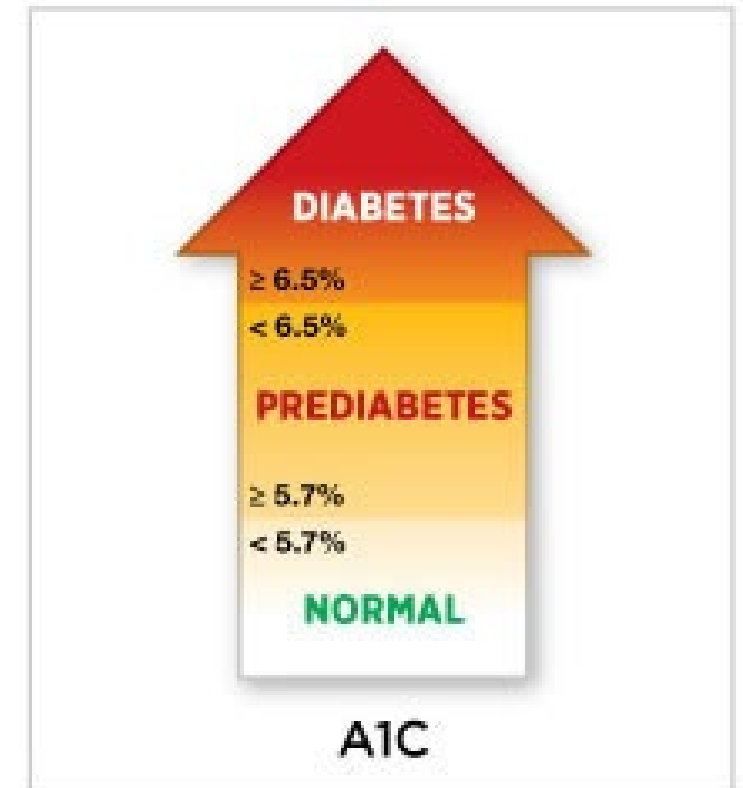
Diabetes Care Plan – PART I

Visits with your primary care doctor:

- ▶ A1c testing 2-4 times a year, depending on your blood sugar levels
- ▶ Blood Pressure at each visit
- ▶ Cholesterol and flu shot each year

What to Ask Your Doctor at an Appointment

1. What is my target blood glucose range?
2. How often should I check my blood glucose?
3. Ask for nutritional counseling if you are having trouble eating healthy
 - ▶ How much carbohydrates can I have?



Diabetes Care Plan – PART II

Visits with a Specialist:

- ▶ Dental exam (Dentist)
- ▶ Dilated eye exam (Ophthalmologist)
- ▶ Complete foot exam (Podiatrist)
- ▶ Kidney Check (Nephrologist)

How can you manage your medications better?

- ▶ Don't stop taking medicine unless you talk to your doctor first
- ▶ Use a pillbox to organize your medications
- ▶ Be sure to schedule follow-up appointments with your doctor to get a refill
- ▶ If your medication isn't working, notify your doctor right away
- ▶ Ask if your pharmacist if they can print medicine labels in your language

Diabetes and Heart Disease

- ▶ Diabetes increases your **chance of developing heart disease**, which can lead to **heart attack and stroke**.
- ▶ What else can increase your chance of heart disease?
 - ▶ High cholesterol
 - ▶ High blood pressure
 - ▶ Smoking & Tobacco Use



Lower your risk for heart disease:

1. Manage Cholesterol

“Bad” Cholesterol (LDL) clogs your blood vessels. (**L**DL = **L**ower is better!)



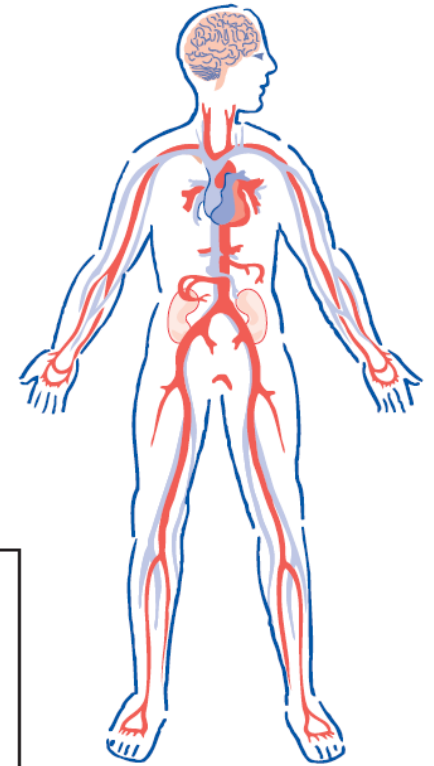
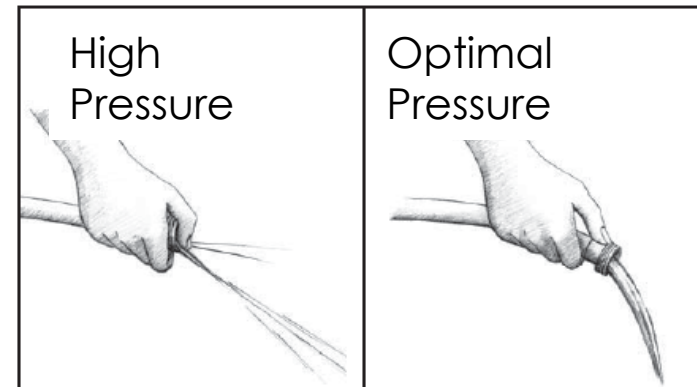
“Good” Cholesterol (HDL) cleans up fat and bad cholesterol from your blood vessels. (**H**DL = **H**igher is better!)

Lower your risk for heart disease:

2. Manage Blood Pressure

- ▶ If you have high blood pressure, it means your heart has to pump harder than it should to get blood to all parts of your body.

Having high blood pressure and blood vessels that are narrowed or clogged is like turning on a garden hose and holding your thumb over the opening.

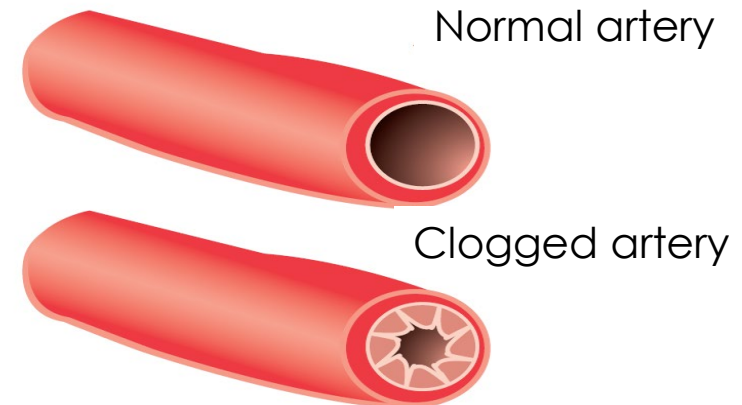


High Blood Pressure Goals

- ▶ Hypertension is diagnosed if someone has high blood pressure (higher than 140/90) on two or more doctors visits.
- Blood Pressure Goal:
 - for people with diabetes: **below 130/80**
 - for people with prediabetes: **below 120/80**

What is Heart Disease?

- ▶ Heart disease can mean problems with the heart and blood vessels that are related to a build-up of waxy substances made of fat, cholesterol and minerals (called “plaque”) on the walls of the arteries.
- The buildup makes the arteries more narrow, which makes it harder for the blood to flow through.
- This build up can lead to a heart attack or stroke.



What is a heart attack and stroke?

Heart Attack

- ▶ Can occur when blood flow to the heart is blocked.
- ▶ Can lead to death.

Stroke

- ▶ “Brain attack”
- ▶ Can occur when blood flow to the brain is blocked, causing brain cells to die.
- ▶ Can lead to disability and death.

Warning Signs of a Heart Attack

- ▶ Chest pain or discomfort
- ▶ Discomfort in other areas of the upper body
- ▶ Difficulty breathing
- ▶ Feeling lightheaded, breaking out in a cold sweat, or feeling like you are going to throw up

If you or someone you know has these symptoms, do not ignore these signs.

Seek immediate medical attention!

Dial 9-1-1

Warning Signs of a Stroke

The warning signs of a stroke happen suddenly.

A person may have one or more warning signs:

- ▶ Sudden numbness or weakness of the face, arm or leg, especially on one side of the body
- ▶ Sudden confusion, trouble speaking or understanding
- ▶ Sudden trouble seeing in one or both eyes
- ▶ Sudden trouble walking because of dizziness or loss of balance
- ▶ Sudden severe headache

**If you or someone you know has these symptoms,
seek immediate medical attention!**

Dial 9-1-1



Summary: Diabetes and Heart Health

- ▶ Over time, high blood sugar from diabetes can cause damage to blood vessels.
- ▶ The longer you have diabetes, the higher the chances you will develop heart disease, which can lead to heart attack and stroke.
- ▶ How can you lower your chances for heart disease?

Manage your blood sugar, blood pressure, and cholesterol.

Heart Attack Versus Heartburn (Acid Indigestion)

- ▶ Heartburn is caused by stomach acids rising up into your esophagus. This can cause chest pain; this pain can sometimes spread to your neck, throat or jaw.
- ▶ Many people confuse the symptoms of heartburn and heart attack, and do not seek immediate treatment for heart attack, which can be dangerous.

If you:	It is probably...
Burb/belch, and symptoms go away by themselves or with a heartburn medication	heartburn
Have shortness of breath or sweating	a heart attack

- ▶ If you're not sure, seek medical attention right away.

Heart Attack Versus Heartburn (Acid Indigestion)

Heart Attack	Heartburn
Tightness, pressure, squeezing, stabbing, or dull pain, most often in the center of the chest	Burning chest pain that begins at the breastbone
Pain that spreads to the shoulders, neck, or arms	Pain that moves up toward your throat but doesn't typically radiate to your shoulders, neck, or arms
Irregular or rapid heartbeat	Sensation that food is coming back into your mouth, or belching/burping
Cold sweat or clammy skin	Bitter or acidic taste at the back of your throat
Lightheadedness, weakness, or dizziness	Pain that worsens when you lie down or bend over
Shortness of breath	
Nausea, indigestion, and sometimes vomiting	
The appearance of symptoms with physical exertion or extreme stress	The appearance of symptoms after a large or spicy meal

Quiz: Question 1

Q 1) If your blood sugar is low, you should

- a) Do exercise
- b) Take more medicine than prescribed
- c) Take regular soda, juice, or candy or glucose tablets

Answer

Q 1) If your blood sugar is low, you should

- a) Do exercise
- b) Take more medicine than prescribed
- c) Take $\frac{1}{2}$ cup of juice, candy, or glucose tablets**

Quiz: Question 2

Q 2) A diabetic person is twice as likely to develop glaucoma as compared to other adults.

- a) True
- b) False

Answer

Q 2) A diabetic person is twice as likely to develop glaucoma as compared to other adults.

- a) True**
- b) False

Quiz: Question 3

Q 3) What are common signs of gum disease?

- a) Pink gums, firm, no bleeding
- b) Swollen gums that bleed when brushing
- c) There are no signs of gum disease

Answer

Q 3) What are common signs of gum disease?

- a) Pink gums, firm, no bleeding
- b) Swollen gums that bleed when brushing**
- c) There are no signs of gum disease

Quiz: Question 4

Q 2) How should you maintain your heart health?

- a) Keep your blood pressure under control
- b) Manage your cholesterol levels
- c) Avoid smoking or using tobacco
- d) All of the above

Answer

Q 2) How should you maintain your heart health?

- a) Keep your blood pressure under control
- b) Manage your cholesterol levels
- c) Avoid smoking or using tobacco
- d) All of the above**

Physical Activity

Lets move!
I will lead you in a 10 minute activity.

Deep Breathing

- Be sure you are sitting down in a comfortable position (at home, try to find a quiet place).
- Uncross your arms and legs and rest your feet gently on the floor.
- Take a slow, deep breath.
- Hold your breath for about 4 seconds.
- Exhale slowly, pushing out as much air as you can.
- Repeat these steps 5 times.

Exercises - Stretching

Neck Exercise: improves flexibility and relieves tension in neck. (3 reps)

1. Sit in your chair with your back firmly against it.
2. Slowly, turn your head from left to right and hold the position for 10 seconds.
3. Take deep, slow breaths while doing this exercise.



Exercise - Stretching

Chest Stretch: stretches the chest muscles, and is good for posture.

1. You can do this stretch while standing or sitting in a sturdy, armless chair.
2. Keep your feet flat on the floor, shoulder-width apart.
3. Hold arms to your sides at shoulder height, with palms facing forward.
4. Slowly move your arms back, while squeezing your shoulder blades together. Stop when you feel a stretch or slight discomfort.
5. Hold the position for 10-30 seconds.

Repeat 3 times



Exercise - Stretching

Upper Back Exercise: improves flexibility and helps with your shoulder and upper back muscles.

1. Please remain seated and place your feet firmly on the ground.
2. Hold arms in front of you at shoulder height with palms facing outward.
3. Relax your shoulders and reach forward with your hands.
4. Hold position for 10 seconds.
5. Be sure to take slow, deep breaths.

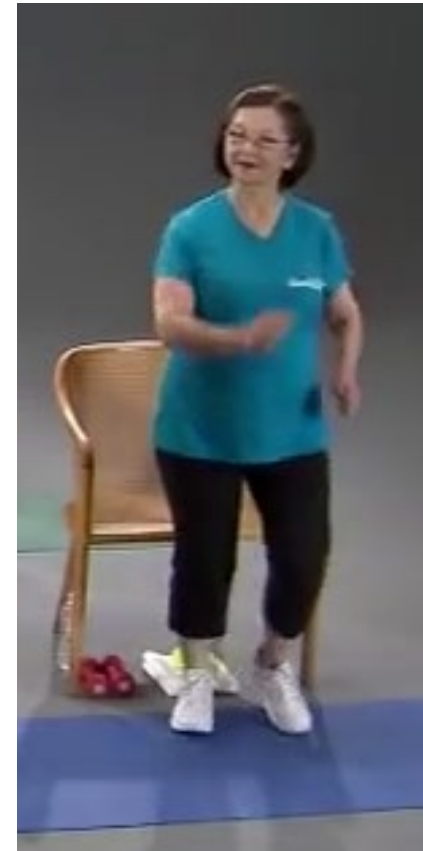
Repeat 3 times



Exercise – Warm Up

Walking in Place

1. Breathe deeply as you walk in place at an easy pace, swinging your arms naturally, for two minutes to warm up your muscles.



Exercise – Strengthening

Stand to Sit: Strengthens your abdomen and thighs, will make it easier to get in and out of a chair

1. Sit toward the front of a sturdy, armless chair with knees bent and feet flat on floor, shoulder-width apart.
2. Lean back with your hands crossed over your chest. Keep your back and shoulders straight throughout exercise. Breathe in slowly.
3. Breathe out and bring your upper body forward until sitting upright.



Exercise – Strengthening Continued

4. Extend your arms so they are parallel to the floor and slowly stand up.
5. Breathe in as you slowly sit down.
6. Rest; then repeat 10-15 more times.



Exercise - Cardio

Walking Side to Side: This exercise will slowly increase your heart rate

1. Stand with your feet together
2. Step side to side at an easy pace
3. Remember to keep your stomach tucked in
4. Continue to step side to side for 1 minute



Exercise – Strengthening using a resistance band

Arm Curl: This exercise will strengthen your arm muscles

1. Sit in a sturdy, armless chair with your feet flat on the floor, shoulder-width apart.
2. Place the center of the resistance band under both feet. Hold each end of the band with palms facing inward. Keep elbows at your sides. Breathe in slowly.
3. Keep wrists straight and slowly breathe out as you bend your elbows and bring your hands toward your shoulders.
4. Hold the position for 1 second.
5. Breathe in as you slowly lower your arms.
6. Repeat 10-15 times.
7. Rest; then repeat 10-15 more times.



Exercise – Strengthening using a resistance band

Single Lateral Arm Raise: This exercise will strengthen your arm muscles

1. Hook the resistance band firmly under the arch of your feet.
2. Hold the band with arms straight and by your side.
3. Pull the band up and to the side until your arms are level with your shoulder, pointing out to your right and left sides.
4. Slowly lower arms. Repeat 20 times.



Exercise – Strengthening using a resistance band

Standing Arm Raise: This exercise will strengthen your arm muscles

1. Stand tall with feet hip-width apart. Place the resistance band under both feet.
2. Hold the band in each hand, palms facing down, and arms straight slightly in front of you
4. Slowly raise both arms, keeping them straight, up to shoulder height, taking care not to lift your shoulders.
3. Slowly lower your arms. Repeat 20 times.

