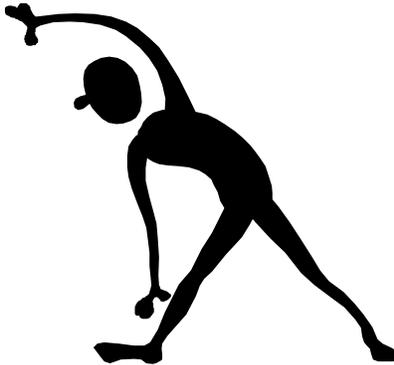


Kennedy's Disease 'Smart' Exercise Guide

Part II – Physical Therapist Recommendations



Updated January 22, 2009

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Part II – Physical Therapist Recommendations (Update)

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Disclaimer

The information and recommendations contained in this ‘guide’ are the opinions of the author and are based upon his experiences. Anyone reading this ‘guide’ agrees to the following conditions:

- The information provided in this ‘guide’ should not to be considered medical advice. The ‘guide’ should also not be considered a substitute for the advice of a trained medical professional or physical therapist. It is recommended that you consult with your family physician and neurologist prior to beginning any exercise program.
- The author has made a reasonable effort to ensure that all information provided is accurate, but as with any document, errors might occur. It is entirely the responsibility of the reader to determine the validity of any information provided. Any decisions made based upon the information received from this ‘guide’ are entirely the reader’s responsibility.
- The author, as well as the Kennedy’s Disease Association, makes no representation or warranties about the information provided within this ‘guide’. The author reserves the right to make changes and corrections to this ‘guide’ at any time, without notice.
- The author and the Kennedy’s Disease Association do not accept liability for any direct, indirect, special or consequential damages, or any other damages of any kind resulting from any cause through the use of any information obtained either directly or indirectly from this ‘guide.’

If you have questions, please contact me at kennedysdiseaseinfo@gmail.com.



Bruce Gaughran

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The Concept – Exercise and Kennedy's Disease

Several neurologists confirm that light and (I will use the term) 'smart' **exercising is good for your muscles and motor neurons** because it stimulates them and keeps them functioning longer. Another benefit of exercise and stretching is that it can cause '**cell inhibition.**' Cell inhibition happens when an activity just started, such as an exercise (or a back scratch or massage), temporarily blocks an unpleasant sensation like a chronic pain. The nerve transmits the pain signal to a cell in the spinal cord which is inhibited by the new "traffic" caused by the new stimulus. It is why pinching the cheek blocks the pain from the anesthesia needle in dentistry.

However, any type of activity that overly taxes your muscles could be detrimental to your condition. The key is to just do what the body feels comfortable doing. Never exceed your capabilities. **The goal is to stimulate the healthy muscles and motor neurons without doing any harm to them.**

INSTRUCTIONS

1. **These exercises should be performed slowly.** Performing an exercise slowly actually helps prevent muscle and joint damage and requires fewer repetitions to gain the same benefit. **Avoid straining and do not hold your breath.**
2. Use the **70% Rule** with every exercise. This rule is meant to prevent any damage to the muscles. **The Rule:** Only perform about 2/3 of the number of repetitions that you can comfortably perform. Do not attempt to perform 'just one more' repetition because that is the one that might cause damage. As your muscles gain strength and flexibility, add more repetitions without breaking the 70% rule.
3. **Do not attempt to perform all of these exercises every day.** Break them up into two or three day cycles where you perform certain exercises one day, others on another day, and set aside certain days to rest. There are five exercises that should be done every day (they are marked in bold). Initially, select those exercises that work for you and that you enjoy doing. This will help you transition into a regular and enjoyable exercise program. As your strength improves, add more exercises. **Example:** You may decide to perform biceps and standing leg exercises on one day and shoulder/triceps and sitting leg exercises on another. **Recommendation:** Develop a checklist (an example is on Page 12) of the exercises you might want to include in your weekly program. Assign days for each exercise. Also, try to incorporate some stretching exercises into your routine.
4. Especially in the beginning, **use a 'spotter'** who can help if you become fatigued or off balance; someone who can help provide assistance/resistance to your muscles in the performance of an exercise.

DO NO HARM

1. Always consult your physician before beginning any new exercise program.
2. Your first concern should be for your safety. Before performing standing and walking exercises, see the "**Safety Notes**" in each section.
3. Your second concern should be to 'do no harm'. Use the 70% Rule described above.
4. **If you feel pain during an exercise, discontinue that exercise** for the day.

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Recommended Exercise Program

The following exercises were recommended by a certified Physical Therapist. Several of these exercises are designed for someone that is having difficulty walking; or feels more comfortable in a wheelchair, but can still stand and transfer without assistance. Most exercises can be modified by adding light weights and by holding a position for a longer period of time. I have personally performed all of these exercises and found them to be very helpful in maintaining and improving my strength and my balance as well as providing me with improved self-confidence.

A. STANDING LEG EXERCISES

Note: The exercises below are meant to flex and stimulate the muscles. If performed properly, they will also strengthen or maintain strength in the muscles. **Important:** The key is to perform each exercise slowly. After each exercise flex the muscle groups a few times to help release the tension.

1. **Knee Bends:** *(See Safety Note below) Works the quads, calves, and buttock muscles. This exercise will help improve your confidence, the ability to stand up, and the ability to recover should your knees begin to buckle.* Face a kitchen counter (preferably the sink) and stand approximately 3-5" out from the counter with a chair or wheelchair about 3" behind your legs (in case you lose your balance or become tired). While holding on to the sink and keeping your posture upright (do not lean forward), slowly allow the knees to bend forward until they rest against the cupboards below the sink. Straighten the legs. Perform 10-15 reps (or whatever is comfortable). Note: When 3-5" is too easy, move out 3" further. Continue to move out further as the exercise becomes too easy or until you are almost sitting on the chair behind you when the knees are touching the cupboards. **To increase the difficulty:** Hold the knees against the cupboards for a count of five.
2. **Stand at Attention:** *(See Safety Note below) Works the abdomen, back, buttocks, quads, calves, ankles, feet and toe muscles. This is an excellent exercise that will improve your confidence when standing without the support of a cane or walker.* Stand in front of a counter, railing, or grab bar with your feet placed about shoulder width apart. While holding the grab bar, stand at attention with your shoulders back, chin up, and stomach and buttocks pulled in. Once comfortable with the position, let go of the grab bar (or counter) and continue to hold the position for as long as comfortable. If you feel yourself falling too far forward or backwards, use one hand to steady yourself and then let go once you are comfortable again. Rest and repeat 2-3 times (or whatever is comfortable). *[Include in your Daily Exercise Program until comfortable with Sway the Hips]*
3. **Sway the Hips:** *(See Safety Note below) This is a continuation of 'Stand at Attention' and further improves the strength in the muscles mentioned above.* Stand in front of a counter, railing, or grab bar with your feet placed about shoulder width apart. While holding the grab bar, stand at attention with your shoulders back, chin up, and stomach and buttocks pulled in. Once comfortable with the position, let go of the grab bar (or counter) and find your balance. Begin to slightly sway your hips to the left and then the right. Initially, only go an inch or two in each direction. Perform 15-20 sways (or whatever is comfortable). **To increase the difficulty:** Increase the distance traveled for each hip sway until most of your weight is on one leg or the other. If you feel yourself

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falling too far forward or backwards, use one hand to steady yourself and then let go once you are comfortable again. *[Include in your Daily Exercise Program when comfortable performing this exercise]*

4. **Roll the Hips:** *(See Safety Note below)* This is a continuation of 'Stand at Attention' and 'Sway the Hips' and further improves the strength in the muscles mentioned above. Stand in front of a counter, railing, or grab bar with your feet placed about shoulder width apart. While holding the grab bar, stand at attention with your shoulders back, chin up, and stomach and buttocks pulled in. Once comfortable with the position, let go of the grab bar (or counter) and find your balance. Begin to gently roll the pelvis forward and backwards. Initially, only go an inch or two in each direction. Perform 15-20 rolls (or whatever is comfortable). **To increase the difficulty:** Increase the distance traveled for each roll. If you feel yourself falling too far forward or backwards, use one hand to steady yourself and then let go once you are comfortable again.
5. **Step in Place:** *(See Safety Note below)* Works the quads, calves, and buttock muscles. This exercise will help improve your balance as well as the ability to walk heel-to-toe and to stand more comfortably. Lean (do not bend) forward and place your hands on a grab bar, railing, or counter. Slightly bend and lift your left leg so all of your weight is transferred to the right leg. Hold for a count of five. While holding the position, visualize the tightening of your right buttock muscles. Straighten the left leg. Shift your weight to the left leg and slightly lift and bend your right leg. Hold for a count of five. Again visualize the tightening of your left buttock muscles. Perform 90-100 steps (or whatever is comfortable). The visualization part of this exercise is as important as the weight shifting. When comfortable, increase the hold count to ten before shifting. **To increase the difficulty:** Stand up straight while holding the grab bar and with each step lift the knees as high as possible and hold for a count of ten. *This also works the hip muscles. [Include in your Daily Exercise Program until comfortable with Sway the Hips]*
6. **Side Kicks (hip extensions):** *(See Safety Note below)* Works the hip muscles. This exercise will help improve your balance and help you stand more comfortably. Stand up straight and place your hands on a grab bar, railing, or counter. Keeping your left leg straight and your knee and foot facing forward, slowly slide your leg out to the side as far as comfortable. Slowly return the leg to the starting position. Perform 10-15 kicks (or whatever is comfortable). Repeat using the right leg. **To increase the difficulty:** With the leg extended out to the side, hold it in that position for a count of five (or as you become stronger hold for a count of ten).
7. **Back Kicks (hip extensions):** *(See Safety Note below)* Works the hip muscles. This exercise will help improve your balance and help you stand more comfortably. Stand up straight and place your hands on a grab bar, railing, or counter. Keeping your left leg straight and your knee and foot facing forward, slowly kick (move) your leg out as far back as comfortable. Slowly return the leg to the starting position. Perform 10-15 kicks (or whatever is comfortable). Repeat using the right leg. **To increase the difficulty:** With the leg extended back, hold it in that position for a count of five (or as you become stronger hold for a count of ten).

Safety Note: *For increased safety when initially performing these exercises, have someone stand behind you or to your side ready to grab your belt should you become fatigued or off-balance.*

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B. SITTING LEG EXERCISES

1. **Quad Contractions:** *Works the quads. This exercise further strengthens the leg muscles.* Sit in a chair with a footstool or another chair in front of you. Straighten the left leg and rest the heel on the stool (or chair). Using your quad muscles only, press down until the leg is straight and pressure is felt in the quad muscle. Hold for the count of five and then relax. Perform 10-15 reps (or whatever is comfortable). Switch to the right leg and repeat the exercise.
2. **Knee Lifts:** *Works the quads and hip flexors. This exercise further strengthens the leg muscles.* Sit in a chair. Lift the left knee as high as comfortable and hold for a count of five. Relax the left leg. Lift the right knee as high as comfortable and hold for a count of five. Relax the right leg. Perform 10-12 lifts with each leg (or whatever is comfortable).
3. **Straighten the Leg:** *Works the quads. This exercise further strengthens the leg muscles.* Sit in a chair. Straighten and lift the left leg out in front of you as high as comfortable. Hold for a count of five. Relax the left leg. Straighten and lift the right leg out in front of you and hold for a count of five. Relax the right leg. Perform 10-12 lifts with each leg (or whatever is comfortable).
4. **Write the Alphabet:** *Works the quads, calves, ankles, and feet muscles. This exercise further strengthens the leg muscles and develops greater flexibility.* While sitting, use the toes on the left foot to write out the alphabet. Point with your big toe like you are writing in the sand. At first try to write 'A' through 'H' (or whatever is comfortable). After you finish your letters, switch to the right foot and begin again. **To increase the difficulty:** Increase the number of letters written until you can write 'A' through 'Z'.
5. **Heel Raises:** *Works the calves, ankles, and feet muscles. This exercise further strengthens the lower leg muscles and develops greater flexibility and confidence.* Sit with your feet directly below your knees (at a 90 degree angle to your thighs). Raise your heels as high as possible while keeping your toes on the floor. Hold the position for a count of two and then return your heel to the floor. Perform 15-20 heel lifts (or whatever is comfortable). **To increase the difficulty:** Stand in front of a counter or grab bar to perform the raises. *(If using the Increased Difficulty method, see Safety Note below)*
6. **Toe Raises:** *Works the ankles, and feet muscles. This exercise further strengthens the lower leg muscles and develops greater flexibility and confidence.* Sit with your feet as far out in front of you as possible while still keeping the feet flat on the floor. Raise your toes as high as possible while keeping your heels on the floor. Hold the position for a count of two and then return your toes to the floor. Perform 15-20 heel lifts (or whatever is comfortable). **To increase the difficulty:** Stand in front of a counter or grab bar to perform the raises. *(If using the Increased Difficulty method, see Safety Note below)*

Safety Note: *For increased safety when initially performing these exercises, have someone stand behind you or to your side ready to grab your belt should you become fatigued or off-balance.*

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C. LYING DOWN EXERCISES

1. **Hip and Knee Flexes:** *Works the knees and hip muscles.* Lie on your back on a bed or the floor with your legs out straight and relaxed. Keep your kneecaps pointed toward the ceiling throughout the exercise. Slightly lift the left foot and slowly slide the foot toward your buttocks, bending the knee and hip. Slowly return to the starting position and relax. Perform 10-15 flexes (or whatever is comfortable). Repeat using the right leg.
2. **Side Swing:** *Works the hip muscles.* Lie on your back on a bed or the floor with your legs out straight and relaxed. Keep your legs straight and your toes pointed toward the ceiling throughout the exercise. Slightly raise the left leg and slowly move the leg out to the side as far as comfortable. Slowly return to the starting position and relax. Perform 10-15 flexes (or whatever is comfortable). Repeat using the right leg.
3. **Sit Ups:** *Works the back, abdomen and hip muscles.* Lie on your back on a bed or the floor with your legs bent at the knees. With your arms along your side, pull yourself up as far as comfortable using your arms as a counterbalance out in front of you. If you cannot pull yourself up using your abdominal muscles, allow your hands to grab the back of your thighs to help. Focus on your abdominal muscles during the exercise. Slowly return to the starting position and relax. Perform 10-15 sit ups (or whatever is comfortable). Even if you cannot actually perform a sit up, by focusing on contracting the abdominal muscles, you will strengthen your back, hips and abdomen.

D. UPPER BODY EXERCISES

Note: Keep in mind that the objective in all these exercises is to fire the motor neurons to keep the muscles active and healthy as well as to maintain your strength. You are not trying to build muscle mass. **Important:** The key is to perform these exercises slowly. After each exercise slowly flex the muscle groups a few times to help release the tension.

1. **Chop Wood:** *Works the triceps, biceps, and shoulder muscles.* While sitting with your knees apart, clasp both hands together and reach down between your legs. While keeping your arms locked out straight, slowly raise your clasped hands all the way above your head (like lifting an axe above your head). Hold for the count of five and then slowly bring the hands back down between your legs. Perform 12-15 reps (or whatever is comfortable). **To increase the difficulty:** Hold a one to three pound weight or a can of soup or soda in your hands.
2. **Triceps Lifts:** *Works the triceps muscles.* While sitting, raise your left arm straight above your shoulder. If needed, use your right hand to support the left arm. Slowly bend the elbow so your left hand touches your ear. Slowly straighten the arm. Perform 10-12 reps (or whatever is comfortable). Switch to the right arm and perform the same exercise. **To increase the difficulty:** Hold a one-pound weight or a can of soup or soda in your hand.

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3. **Arm Reach and Twist (Draw the Sword):** *Works the triceps, biceps, and shoulder muscles as well as improves flexibility.* While sitting, reach your left hand down and across your right knee. Your left wrist should be twisted clockwise as far as possible so the fist is facing the left knee. Keeping your arm straight, slowly raise the left arm up. As you begin to raise the arm twist your wrist counter-clockwise on the way up. As you reach high above your left shoulder, continue twisting your wrist as far as possible. Hold for a count of two. Slowly return the arm to the starting position as you twist the wrist in a clockwise motion. While performing the exercise, maintain tension in the arm, wrist, and hand. Perform 12-15 reps (or whatever is comfortable). Switch to the right arm and repeat. **To increase the difficulty:** Hold a one-pound weight or a can of soup or soda in your hand. *[Include in your Daily Exercise Program]*
4. **Pull Arm Across and Twist (Ward Off a Blow):** *Works the triceps, biceps, and shoulder muscles as well as improves flexibility.* While sitting, make a fist and reach your left hand up and across your face as if trying to ward off a blow. At the top position, the fist should be facing the upper right side of your forehead. Slowly draw the arm down across your chest and continue to pull it down across the left knee until the arm is straight on the outside of your left knee. While pulling it down, open the fist, spread the fingers, and twist the wrist clockwise as far as comfortable. Hold for a count of two. Slowly return to the starting position by reversing the motions including the twisting counter-clockwise of the hand and forming a tight fist at the top. While performing the exercise, maintain tension in the arm, wrist, and hand. Perform 12-15 reps (or whatever is comfortable). Switch to the right arm and repeat.
5. **Chair Push Ups:** *Works the biceps, triceps, shoulder muscles, and quads. This exercise will help improve your ability to stand up from a chair or commode.* Sit in an arm chair or wheelchair with your feet tucked in close to the chair. Place your hands on the arms so they are aligned with your hips. Attempt to lift your buttock off of the chair by pushing up and straightening your arms. Hold for a count of five and then relax. Perform 10-15 lifts (or whatever is comfortable). Even if you cannot initially lift yourself off of the chair, the biceps, triceps and quads will still be worked. *[Include in your Daily Exercise Program]*
6. **Side Lifts:** *Works the triceps, biceps, and shoulders muscles.* While sitting, extend your arms straight out to the side. Make a fist with your palms facing down. While inhaling and keeping the arms straight, slowly lift the arms straight out to the side (horizontal to the floor). Hold for a count of five and then begin to exhale as you slowly lower your arms back to your sides. Perform 10-12 reps (or whatever is comfortable). Repeat the exercise with your palms facing up. **To increase the difficulty:** Hold a one-pound weight or a can of soup or soda in each hand.
7. **Front Lifts:** *Works the triceps, biceps, and shoulders muscles.* While sitting, extend both arms out so that they are on the outside of your knees. Make a fist with your palms facing down. While inhaling and keeping the arms straight, slowly lift the arms straight out in front of you until they are horizontal to the floor. Hold for the count of five and then begin to exhale as you lower the arms slowly back to the starting position. Perform 10-12 reps (or whatever is comfortable). Repeat the exercise with your palms facing up. **To increase the difficulty:** Hold a one-pound weight or a can of soup or soda in each hand.

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8. **Side Curls:** *Works the triceps, biceps, and shoulders muscles.* While sitting, extend both arms straight out from your sides so they are horizontal to the floor and your fists are facing upwards. While inhaling, slowly bend your elbows and curl your fists into your shoulders. When the hands are almost touching your shoulders, contract (flex) your biceps and hold for a count of two. Begin to exhale as you slowly uncurl the elbows so they are once again straight out to your side and horizontal to the floor. At this point, contract (flex) your triceps and hold for a count of two. Perform 10-12 reps (or whatever is comfortable). **To increase the difficulty:** Hold a one-pound weight or can of soup or soda in each hand.
9. **Front Press:** *Works the triceps, biceps, and shoulders muscles.* Sit with you're your back straight. Using your cane (a broom, light metal bar, or light dumbbells), bring the cane/pole up to your chest with the palms facing out (a press position). While exhaling, slowly push the cane/pole above your head until the arms are fully extended. Hold the posture for a count of five. While inhaling, allow the arms to slowly return to the front of the chest. Perform 10-12 reps (or whatever is comfortable). **To increase the difficulty:** Increase the weight of the object being lifted.
10. **Back Press:** *Works the triceps and shoulders muscles.* Sit with you're your back straight. Using your cane (a broom, light metal bar, or light dumbbells), raise the cane/pole up above your head and lower it to the back of your neck with the palms facing forward. While exhaling, slowly push the cane/pole above your head until the arms are fully extended. Hold the posture for a count of five. While inhaling, allow the arms to slowly return to the back of your neck. Perform 10-12 reps (or whatever is comfortable). **To increase the difficulty:** Increase the weight of the object being lifted.
11. **Back Curl:** *Works the triceps and wrists muscles.* Sit with you're your back straight. Grasping your cane (a broom, light metal bar, or light dumbbells) with your palms facing down, raise it over your head and let it rest on the back of your neck (your palms should now be facing up). While exhaling, slowly straighten (curl) the arms upward until they are straight above your head. Hold for a count of five. While inhaling, slowly return the arms to the starting position at the back of your neck. Perform 10-12 reps (or whatever is comfortable). Repeat the exercise with your palms facing up. **To increase the difficulty:** Increase the weight of the object being lifted.

E. WRIST AND HAND EXERCISES

Note: As hand strength weakens and physical dexterity declines, it is important to exercise the hands, fingers, and wrists. Keep in mind that the objective of all of these exercises is to fire the motor neurons to keep the muscles active and healthy as well as to maintain your strength.

1. **Wrist Curls:** *Works the wrist muscles.* Sit with your back straight and your feet directly below your knees (90 degree angle). Holding a cane (a broom, light metal bar, or light dumbbells) in both hands with your palms facing up and your forearms flat on your thighs, curl the wrists up as far as possible without raising your arms from your thighs. Perform 15-20 reps (or as many as comfortable). Repeat the exercise, but this time have your palms facing down while still curling the wrists up. **To increase the difficulty:** Increase the weight of the object being lifted.

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2. **Wring Out the Towel:** *Works the wrist, hand and finger muscles.* Using a wash cloth or small towel, roll it into a 3-4" ball. Grasp the wash cloth in both hands and begin to wring it out using your wrist and fingers. Perform 15-20 reps (or as many as comfortable). Repeat the exercise, but this time wring the towel out in the other direction.
3. **Make a Ball Out the Towel:** *Works the hand and finger muscles.* Place a wash cloth or small towel flat on a counter. Place your hand over the towel so the heel of your hand is resting on the edge of the towel. Keeping the heel of your hand on the counter at all times and using your fingers, begin to pull the towel into your wrist to form a ball. Once you have a tight ball, reverse the process by trying to flatten out the wash cloth using just your fingers while keeping the heel of the hand still on the counter. Repeat the exercise using your other hand.
4. **Finger Scissors:** *Works the finger muscles.* Take your left hand with the palm down and fingers extended out straight. Place your index finger from your right hand in between the first two fingers. Squeeze your fingers together and hold for a count of two then relax. Perform 10-15 reps (or whatever is comfortable). Repeat the exercise using each set of fingers until you have worked all the fingers on both hands.
5. **Squeeze the Racket (Ball):** *Works the wrist, hand and finger muscles.* Using a tennis racket, exercise putty, or a rubber ball (like a racquetball), squeeze and hold the racket (putty or ball) for a count of five and then relax. Perform 15-20 reps (or whatever is comfortable). Repeat the exercise using your other hand.

F. NECK AND SHOULDER EXERCISES

Note: Keep in mind that the objective in all of these exercises is to fire the motor neurons to keep the muscles active and healthy as well as to maintain your strength. **Important:** The key is to perform these exercises slowly. After each exercise slowly flex the muscle groups a few times to help release the tension. An assistant is helpful in applying the resistance.

1. **Bend to the Chest:** *Works the neck and shoulder muscles.* While sitting, place your palm against your forehead. Lower your chin down to touch your chest, while having your palm apply resistance (to hold your head up). Perform 10-12 reps (or whatever is comfortable).
2. **Pull the Head Up:** *Works the neck and shoulder muscles.* While sitting, clasp your hands behind your head and lower your chin down to touch your chest. Raise your head up to the normal upright position, while having your hands apply resistance (to hold your head down). Perform 10-12 reps (or whatever is comfortable).
3. **Side Turns:** *Works the neck and shoulder muscles.* While sitting, place your left palm against your cheek and temple. Rotate your chin 90 degrees to the left while having your palm apply resistance (to keep your head from turning). Perform 10-12 reps (or whatever is comfortable). Switch to the right hand and perform the same exercise rotating to the right.
4. **Bend to the Shoulder:** *Works the neck and shoulder muscles.* While sitting, place your left palm against your temple. Lower your head towards your left shoulder (go about half

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way or 45 degrees) while your left hand applies resistance (to hold the head upright). Perform 10-12 reps (or whatever is comfortable). Switch to the right hand and perform the same exercise lowering your head to the right.

5. **Shoulder Shrugs:** *Works the shoulder muscles.* While sitting with your arms at your sides and holding a one-pound weight (or a can of soup or soda) in each hand slowly raise your shoulders and lower them (shrugs). Perform 12-15 reps (or as many as comfortable). **To increase the difficulty:** Instead of a simple shrug, rotate your shoulders in a circle forwards for 10 reps and backwards for another 10.
6. **Side Lifts:** *Works the shoulder muscles.* While sitting with your arms down along your sides slowly raise your arms straight out to the side so they are both parallel to the floor with the palms facing the floor. Hold this position for as long as comfortable. Return the arms slowly to your sides. Perform 2-4 reps (or as many as comfortable) alternating the palms so they are facing up and down. **To increase the difficulty:** Hold a one-pound weight (or a can of soup or soda) in each hand.
7. **Front Lifts:** *Works the shoulder muscles.* While sitting with your arms down along your sides slowly raise your arms straight out in front of you they are both parallel to the floor with the palms facing the floor. Hold this position for as long as comfortable. Return the arms slowly to your sides. Perform 2-4 reps (or as many as comfortable) alternating the palms so they are facing up and down. **To increase the difficulty:** Hold a one-pound weight (or a can of soup or soda) in each hand.
8. **Back Lifts:** *Works the shoulder muscles.* While sitting with your arms down along your sides slowly raise your arms straight back of you as far as comfortable with the palms facing the floor. Hold this position for as long as comfortable. Return the arms slowly to your sides. Perform 2-4 reps (or as many as comfortable) alternating the palms so they are facing up and down. **To increase the difficulty:** Hold a one-pound weight (or a can of soup or soda) in each hand.
9. **Rotator Cup Circles:** *Works the rotator cup and shoulder muscles.* While sitting, extend both arms straight out from your sides so they are horizontal to the floor and your fists are facing downwards. Make small circles with your fists (approximately 6" in circumference). Perform 12-15 circles (or whatever is comfortable). Repeat the exercise circling your fists in the other direction. **To increase the difficulty:** Hold a one pound weight or can of soup or soda in each hand.

G. CANE AND WALKER EXERCISES

Note: The exercises below are designed for those who are having difficulty walking or spending more time in a wheelchair because of strength, balance, and confidence issues, but can still stand comfortably and transfer without assistance.

Walkers: The walker height should be set so that your posture is upright and your forearms are bent at a 25-30 degree angle when grasping the walker. The walker is meant for balance, not for holding up your weight. For better balance while walking, look straight ahead (not down). Tennis balls placed on the end tips help improve traction on slippery surfaces.

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Canes: The cane should be adjusted to the proper height so that your forearm is bent at a 25-30 degree angle when the cane is parallel with your leg (straight down your side). The cane should have a grip that is easy to hold on to and an end-tip that does not slip. For better balance while walking, look straight ahead (not down).

1. **Heel-to-Toe Walk:** *(See Safety Note below) Works the quads, calves, ankles, hips, and feet muscles. This exercise further strengthens the leg muscles and improves your balance and confidence.* Begin to walk by taking a step forward making certain that your heel hits the floor first and your toe is up (do not shuffle). Then roll the foot forward and end the step with your toe pushing off the floor. It should look and feel like a normal step. While walking, keep the shoulders straight and head up. Look straight out in front of you (not down at your feet). Begin slowly and initially have someone walk behind you with their hand in your belt in case you lose your balance. Walk this way as long as comfortable and then take a break. Once comfortable, perform two or three walks a day and continue to increase the distance walked and walk from one surface to another (example - carpet to tile). *[Include this exercise or the Two/Three-Point Walk in your Daily Exercise Program]*
2. **Leg and Cane Shift:** *(See Safety Note below) Works the quads, calves, ankles, feet, and hip muscles. This exercise will help improve your balance and ability to walk.* Stand with your right side next to a counter or grab bar. With your cane in your left hand, place the cane's foot about 3" out from the side of your left foot. Using your hips, shift all of your weight onto the left leg and cane. Hold for a count of five and then shift your weight back to both legs. Repeat 10-15 times (or whatever is comfortable). Turn around and perform the same exercise using the right hand and leg. Once comfortable, hold for a count of ten. **To increase the difficulty:** Lift the opposite leg off the ground as you put all your weight on the cane side leg.
3. **Three-Point Walk:** *(See Safety Note below) Use this method when using a walker regularly to improve your strength and balance.* Stand next to a counter (or railing) and use your left hand, if needed, for balance by touching the counter top (or railing). With your cane in your right hand, move the cane out in front of you about 10-12 inches (or whatever length is comfortable). Lift the left foot up and step forward so it is in line with the cane tip. Now step forward with your right foot until the cane and both feet are together. Do not shuffle your feet. Continue forward and try to make the steps as smooth as possible. Walk to the end of the counter. Rest if needed and then reverse direction using the cane in the left hand. Perform as many trips as safely comfortable. While walking, keep the shoulders straight and head up. Look straight out in front of you (not down at your feet).
4. **Two-Point Walk:** *(See Safety Note below) As strength and balance improves, move to this method for a more natural gait and improved balance.* Stand next to a counter (or railing) and use your left hand, if needed, for balance by touching the counter top (or railing). With your cane in your right hand, move the cane out in front of you about 10-12 inches (or whatever length is comfortable) while stepping forward with the left foot so it comes down in line with the cane tip at the same time. Now step forward with your right foot ... stepping through and beyond the left foot and cane (like a normal step). The cane and left foot are now behind the right foot. Continue forward with the left foot and cane again stepping beyond the right foot 18-24 inches. Try to make the movement as smooth as possible. Walk to the end of the counter. Rest if needed and then reverse direction using the cane in the left hand. Perform as many trips as safely comfortable.

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While walking, keep the shoulders straight and head up. Look straight out in front of you (not down at your feet). **To increase the difficulty:** Once you are comfortable with your balance and strength, try walking next to a wall. Once that is comfortable, extend out further until you do not have anything on the opposite side of your cane.

Safety Note: For increased safety when performing these exercises, have someone stand behind you or to your side ready to grab your belt should you become fatigued or off-balance.

H. SWALLOWING EXERCISES

Note: This exercise is designed to strengthen the throat muscles and make it easier to swallow food. *[Include these exercises in your Daily Exercise Program]*

1. **Stick Out Your Tongue:** Bite down lightly on your tongue to hold it in position. Swallow ten times (or more) while holding the tongue between the teeth. Perform this exercise every day
2. **Large Smile:** Make the sound “EEEEEEEEEEEEEEEEEEEEEEEE” as you stretch your mouth muscles into a large smile. You should be able to feel throat muscles vibrate (stretch).
3. **Pucker your Lips:** Make the sound “OOOOOOOOOOOOOOOOOOOO” as you pucker your lips. You should once again be able to feel your throat muscles vibrate (stretch).

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EXERCISE SCHEDULE CHECKLIST

Note: This is an example. Use this checklist to determine what days you want to perform certain exercises.

	Exercise	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Daily	Stand at Attention or Sway the Hips							
	Arm Reach and Twist							
	Chair Pushups							
	Throat Exercises (All Three)							
	Heel-to-Toe or Two-Point Walk							
	Step in Place							
Leg Standing	Knee Bends							
	Roll the Hips							
	Side Kicks							
	Back Kicks							
	Leg and Cane Shift							
Leg Sitting	Quad Contractions							
	Knee Lifts							
	Leg Lifts							
	Write the Alphabet							
	Heel Raises							
	Toe Raises							
Lying Down	Hip and Knee Flexes							
	Side Swings							
	Push Ups							
Upper Body	Triceps Lifts							
	Side Lifts							
	Front Lifts							
	Side Curls							
	Chop Wood							
	Front Press							
	Back Press							
	Back Curl							
	Pull Arm Across and Twist							
Wrist & Hand	Wrist Curls							
	Wring Out the Towel							
	Make a Ball Out of the Towel							
	Finger Scissors							
	Squeeze the Racket (Ball)							
Neck & Shoulder	Bend to the Chest							
	Pull the Head Up							
	Side Turns							
	Bend to the Shoulder							
	Shoulder Shrugs							
	Side Lifts							
	Front Lifts							
	Back Lifts							
Rotator Cup Circles								