

The Four Elements of Fitness

Here are the four main elements of fitness:

Aerobic Fitness

- Aerobic fitness improves overall health and well-being. It helps your heart, blood vessels, lungs and muscles with routine tasks and allows you to rise to any unexpected event such as running to your car in the rain. Popular aerobic activities include walking, biking, jogging, swimming, and dancing. To gain the greatest benefits you should exercise for at least 10 minutes at a time and for a total of 30 minutes most days of the week.

Muscular Fitness

- Muscular fitness refers to the strength and endurance of your muscles. The more fit your muscles are the easier daily tasks become. Strength training improves your muscular fitness and helps with weight loss by increasing your lean muscle mass. Strength training can be done with free-weights, resistance bands, weight machines, household items, or your own body weight.

Flexibility

- Flexibility is the ability to move your joints through their full range of motion. Flexibility decreases your risk of injury from physical activity. Exercises that lengthen your muscles increase your flexibility. Stretching exercises such as yoga or tai chi are effective in increasing flexibility.

Stability and Balance

- Stability and balance are affected by your body's core strength. Stability and balance can be improved by core exercises that focus on the area around the center of your body. A strong core helps combat poor posture and low back pain as well as preventing falls.



Planned Physical Activities

There are lots of activities to consider if you are trying to become more active. For fitness and variety, choose activities from all three categories. Start slowly and choose activities you enjoy.

Aerobic activities

- Walking
- Stair climbing
- Gardening
- Dancing - any type
- Sports
- Jogging or running
- Aerobic classes
- Roller or ice skating
- Snow skiing
- Exercise machines (treadmill, stairclimber)
- Non-weight bearing and low impact activities (These are good for everyone but particularly beneficial for those with arthritis.)
 - Swimming
 - Bicycling
 - Water walking or water aerobics
 - Some exercise machines (stationary bike, row machine, ski machine, elliptical trainer)

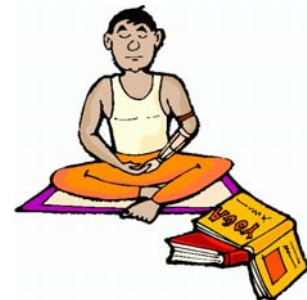


Strength activities

- Free weights (dumbbells, plastic bottles of water, cans of food)
- Elastic bands (available from Prosthetics)
- Conditioning exercises (e.g., sit-ups, push-ups and pull-ups)
- Pilates
- Circuit machines
- Medicine (weighted) and balance balls

Flexibility activities

- Stretching
- Chair exercises
- Yoga
- Tai Chi



MOVE!



Sample Aerobic Activity Plan for Beginners

This is a sample 12-week plan to help meet a goal of 30 minutes of moderate-intensity physical activity on most days of the week.

- The best types of activities for this plan are ones that use large muscle groups (arms, trunk, legs), such as walking, dancing, cycling, swimming, or jogging.
- Remember to begin each session with a brief warm-up (5-10 minutes) and end with a cool-down period (5-10 minutes).
- Rate the intensity of your activity using the Borg Scale below. Use this scale to rate how hard you are exercising. Aerobic activities, like walking and cycling, should be done at level 13 (somewhat hard). Strength activities, like lifting dumbbells and pushups, should be done at levels 15-17 (hard to very hard). You can gradually make activities harder as you become more fit. Activities that used to be hard will become easier over time and earn a lower score compared to when you first started. For example, slow walking on level ground may be a level 13 effort for you in the beginning. As your fitness improves, it may take brisk walking up a slight hill to get to that same level 13 effort.

The Borg Category Rating Scale		
Least Effort		
6		
7	very, very light	
8		
9	very light	
10		
11	fairly light	*****
12		Aerobic Training Zone
13	somewhat hard	*****
14		
15	hard	*****
16		Strength Training Zone
17	very hard	*****
18		
19	very, very hard	
20		
Maximum Effort		

- You can adjust the days of the week on this plan to better fit your schedule.



Weeks 1 through 3 - Getting Started

	Day	Effort/Intensity	Total Duration
Week 1	Sunday	Rest	
	Monday	Borg Level 11-13	10-15 minutes
	Tuesday	Rest	
	Wednesday	Borg Level 11-13	10-15 minutes
	Thursday	Rest	
	Friday	Borg Level 11-13	10-15 minutes
	Saturday	Rest	
Week 2	Sunday	Rest	
	Monday	Borg Level 11-13	10-15 minutes
	Tuesday	Rest	
	Wednesday	Borg Level 11-13	10-15 minutes
	Thursday	Rest	
	Friday	Borg Level 11-13	10-15 minutes
	Saturday	Rest	
Week 3	Sunday	Rest	
	Monday	Borg Level 11-13	10-15 minutes
	Tuesday	Rest	
	Wednesday	Borg Level 11-13	10-15 minutes
	Thursday	Rest	
	Friday	Borg Level 11-13	10-15 minutes
	Saturday	Rest	



Weeks 4 through 7 - Increasing Duration and Frequency

	Day	Effort/Intensity	Total Duration
Week 4 and Week 5	Sunday	Rest	
	Monday	Borg Level 11-13	20-30 minutes
	Tuesday	Rest	
	Wednesday	7-10 minutes at Borg Level 11-13 7-10 minutes at Borg Level 13-16 7-10 minutes at Borg Level 11-13	20-30 minutes
	Thursday	Rest	
	Friday	Borg Level 11-13	20-30 minutes
	Saturday	Rest	
Week 6	Sunday	Borg Level 14-15	20-30 minutes
	Monday	Borg Level 11-13	20-30 minutes
	Tuesday	Rest	
	Wednesday	7-10 minutes at Borg Level 11-13 7-10 minutes at Borg Level 13-16 7-10 minutes at Borg Level 11-13	20-30 minutes
	Thursday	Rest	
	Friday	Borg Level 11-13	20-30 minutes
	Saturday	Rest	
Week 7	Sunday	Rest	
	Monday	Borg Level 11-13	20-30 minutes
	Tuesday	Rest	
	Wednesday	7-10 minutes at Borg Level 11-13 7-10 minutes at Borg Level 13-16 7-10 minutes at Borg Level 11-13	20-30 minutes
	Thursday	Rest	
	Friday	Borg Level 11-13	20-30 minutes
	Saturday	Rest	



Weeks 8 through 12 – Increasing Duration

	Day	Effort/Intensity	Total Duration
Week 8 and Week 9	Sunday	Rest	
	Monday	Borg Level 11-13	30 minutes
	Tuesday	Rest	
	Wednesday	10 minutes at Borg Level 11-13 10 minutes at Borg Level 13-16 10 minutes at Borg Level 11-13	30 minutes
	Thursday	Rest	
	Friday	Borg Level 11-13	30 minutes
	Saturday	10 minutes at Borg Level 11-13 10 minutes at Borg Level 13-16 10 minutes at Borg Level 11-13	30 minutes
Week 10	Sunday	Rest	
	Monday	Borg Level 10	30 minutes
	Tuesday	Rest	
	Wednesday	Borg Level 14	30 minutes
	Thursday	Rest	
	Friday	Borg Level 10	30 minutes
	Saturday	Borg Level 14	30 minutes
Week 11	Sunday	Rest	
	Monday	Borg Level 11-13	30 minutes
	Tuesday	Rest	
	Wednesday	10 minutes at Borg Level 11-13 10 minutes at Borg Level 13-16 10 minutes at Borg Level 11-13	30 minutes
	Thursday	Rest	
	Friday	Borg Level 11-13	30 minutes
	Saturday	10 minutes at Borg Level 11-13 10 minutes at Borg Level 13-16 10 minutes at Borg Level 11-13	30 minutes
Week 12	Sunday	Rest	
	Monday	Borg Level 11-13	30 minutes
	Tuesday	Rest	
	Wednesday	10 minutes at Borg Level 11-13 10 minutes at Borg Level 13-16 10 minutes at Borg Level 11-13	30 minutes
	Thursday	Rest	
	Friday	Borg Level 11-13	30 minutes
	Saturday	Rest	



Week 13 and beyond - Maintenance

- 30 minutes of aerobic activities
- 5-6 times/week
- At Borg Level 13 intensity

For even more help with controlling your weight, consider further increasing the duration, frequency, and/or intensity of your activity.



This sample plan was adapted from: *How to Write an Exercise Prescription* by MAJ Robert L. Gauer, MD and LTC Francis O'Connor, MD, FACSM, Dept of Family Medicine, Uniformed Services University of the Health Sciences.

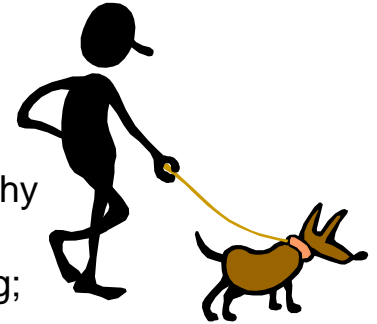


Walk

Walking is a great way to be more physically active. It's free, fun, and you can do it almost anywhere.

Here are 6 reasons to get up and walk:

1. Regular walking burns calories, which in addition to a healthy diet can help you to manage your weight.
2. More than half the body's muscles are designed for walking; it is a natural movement that is almost injury-free.
3. Regular brisk walking has many health benefits.
4. Brisk walking is an aerobic activity. It makes your heart, lungs, and muscles stronger.
5. Walking refreshes the mind, reduces fatigue, increases energy, and improves sleep.
6. Walking can be a great time for sharing and socializing with friends and family.



Getting started:

- A little walking everyday is better than an occasional weekend bout of activity. Start with short walks and build from there.
- Consider using a pedometer to measure the number of steps you walk.
- Warm-up before and cool-down after activity (see *MOVE!* handout P04).
- Choose routes that are interesting, safe and convenient. Avoid heavy traffic, loose dogs, and rough ground. Remember hills are more difficult.
- Walking with others can help motivate you.
- Be safe. Take a friend when it is dark outside. Tell someone where you are going, and bring a cell phone if you can.
- When it is very hot, walk during the coolest hours, choose a shady route, and walk a little slower.
- When it is cold, avoid icy surfaces.
- Dress in loose, comfortable clothing. In cold weather, dress in layers and wear mittens and a hat.
- Wear comfortable, appropriate shoes.



Sample 10-Week Walking Plans to get you started:

This plan is for those who are not used to physical activity.

Week	1	2	3	4	5	6	7	8	9	10
Minutes walking	10	10	15	18	20	20	25	30	32	35
Walks per week	2	3	3	3	3-4	4	4	4	4	4

This plan is for those who are already physically active.

Week	1	2	3	4	5	6	7	8	9	10
Minutes walking	20	22	25	30	30	35	35	40	42	45
Walks per week	3	3	3	3	4	4	4-5	4-5	4-5	4-5



Sample Flexibility Plan for Beginners

Stretching exercises give you more freedom of movement to do the things you need to do and the things you like to do. Stretching exercises alone can improve your flexibility, although they will not improve your endurance or strength.

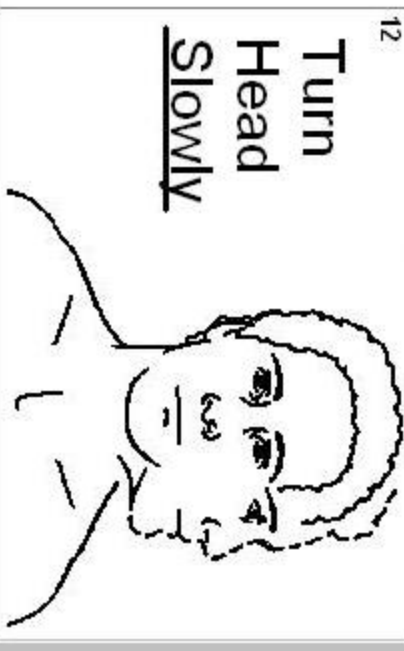
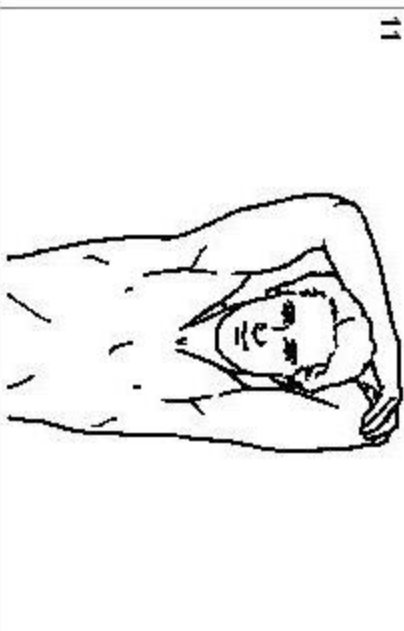
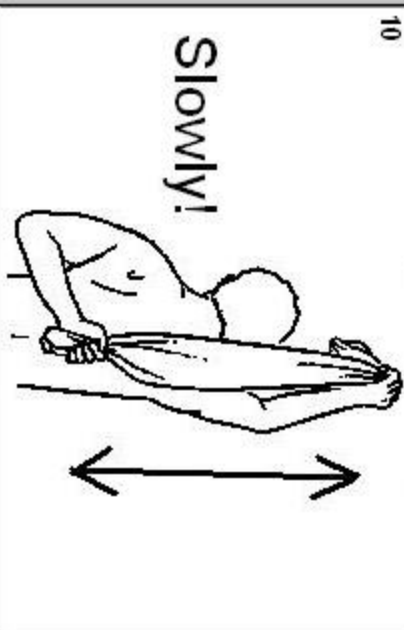
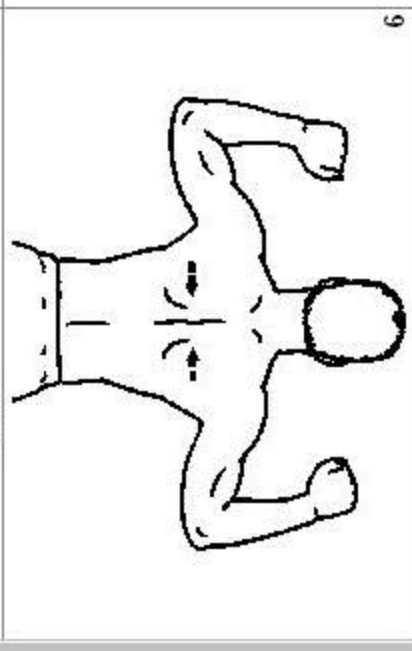
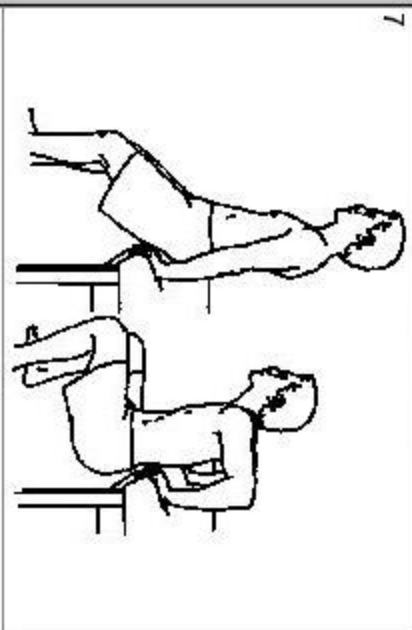
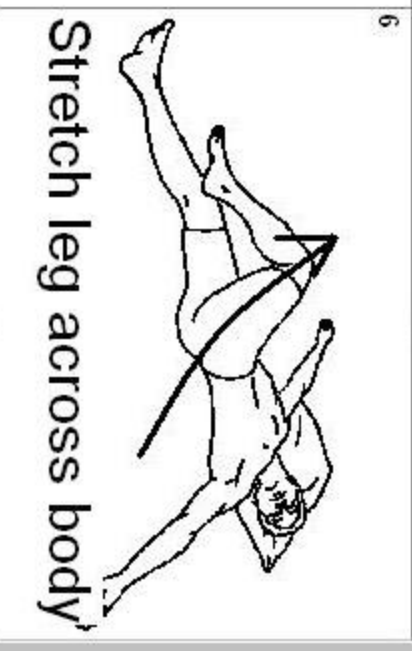
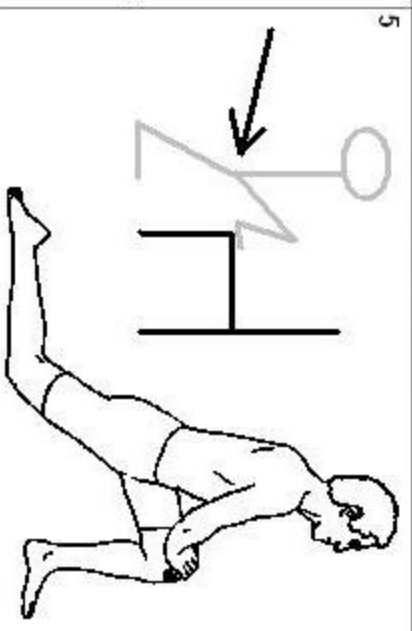
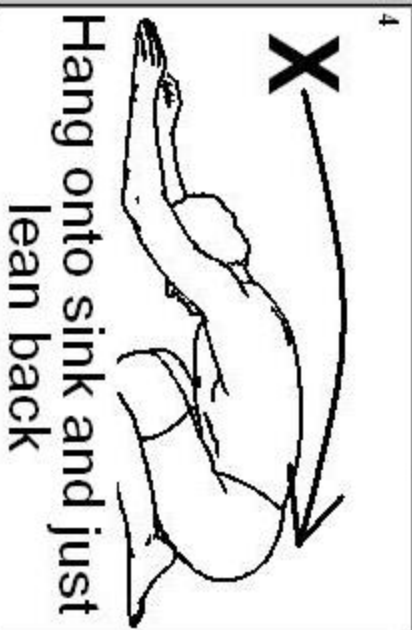
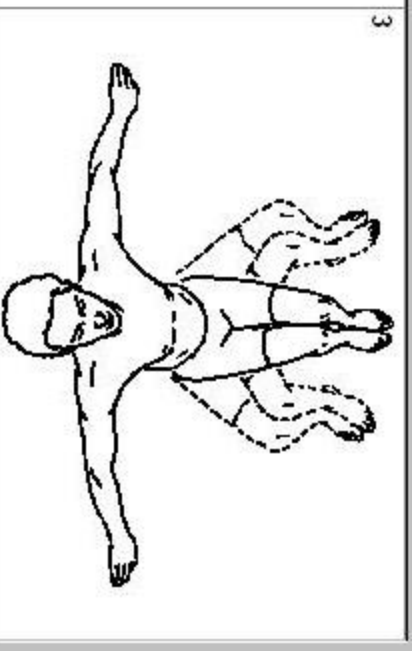
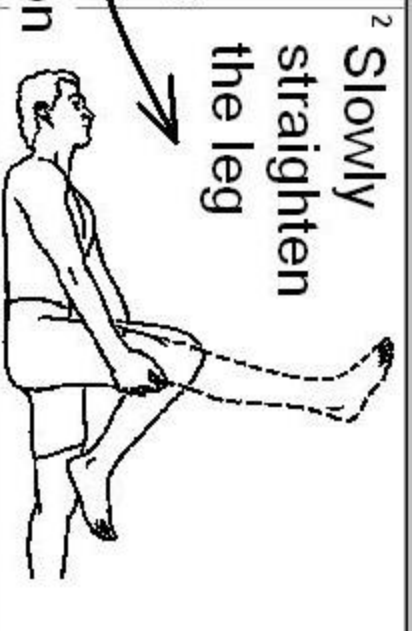
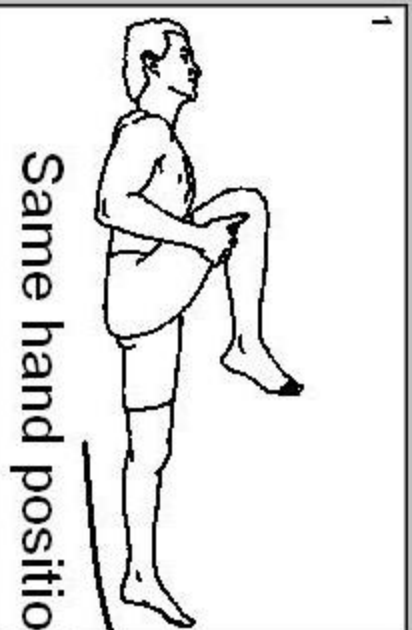
How Much, How Often

- Stretch after you do your regularly scheduled strength and aerobic activities. This should work out to stretching on most, if not all, days of the week.
- 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 3 times a week, for at least 20 minutes each session.
- Do each stretching exercise 3 to 5 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

- If you have had a hip or knee replacement, check with your surgeon before doing lower body exercises.
- Always warm up before doing 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/swinging first).
- Stretching should never cause pain, especially joint pain. If it does, you are stretching too far and you need to reduce the 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 bend in your joints while stretching.
- Some of the exercises require you to lie on the floor. If you are afraid to lie on the floor because you think you won't be able to get back up, consider exercising with a buddy to help you. Alternatively, keep a chair nearby to use as support in getting up.





Some Progressive Balancing Exercise

Stand just in front of your bed, with your bed immediately behind you but not touching your legs. Stand like a statue.

Do these exercises every day moving down the list each week

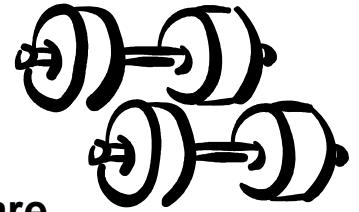
- Wk 1) With feet apart and eyes open, stand perfectly still for 2 minutes
- Wk 2) Stand with feet together and eyes open. Stand like a statue for 2 minutes
- Wk 3) Stand with feet together and eyes closed, perfectly still for 2 minutes
- Wk 4) Now, fold up a soft blanket and stand on that, eyes open for 2 minutes
- Wk 5) The next step is on the folded blanket, feet together, eyes open
- Wk 6) Next is feet together eyes closed. Stand steady for 2 minutes
- Wk 7) Now you are ready to fold up TWO blankets and stand on those, feet apart, eyes open for 2 minutes. Continue these each day.
- Wk 8) Next is feet together, eyes open, on those two blankets for two minutes
- Wk 9) You got it...feet together, eyes closed, standing steady, two minutes
- Wk 10) The last part is standing on a soft couch cushion. Same progressions, feet apart with eyes open for one week.
- Wk 11) Then, feet together eyes open for one week.
- Wk 12) Finally feet together eyes closed for one week. This is pretty tough and you will have already improved your balance significantly.
- Wk 13) Next, place the pillow or couch cushion next to the bed, turn around facing the bed and step up onto the pillow. Then step back off the pillow. Step off and on forward...step off and on sideways.
- Wk 14) From this point you may, if you like, progress to standing on one foot. Again, if you'd like, you can stand on softer surfaces to challenge your balancing.

Balance Recovery:

An important skill to have is the ability to catch your balance once you start leaning or falling. As above, stand immediately in front of your bed; be sure that the bed is not touching your legs. Try to lean backwards as far as you can without falling. The challenge is to get FAR but don't fall. How close to falling can you get without actually going over?

Also practice this forward, reach out over your bed as far as you can, try not to fall forward, just reach and lean and then pull it in to recover. Don't fall! Work on these, also about 2 minutes each but do it every single day.

Strength Training Benefits



There are many benefits to strength training. Here are some of them:

- Builds your muscle strength and stamina
- Improves your balance and coordination, making a fall less likely
- Helps firm and tone your muscles
- Makes it easier to do chores such as carrying groceries, shoveling snow, or doing yard work
- Prevents the loss of muscle tissue
- Keeps bones strong
- Improves your body's ability to use insulin and maintain healthy glucose levels (This is true whether you are diabetic or not)
- Helps your body to burn more calories
- Takes stress off your joints



Sample Strength Activity Plan for Beginners

About Strength Exercise

To do most of the following strength exercises, you need to lift or push weights (or your own body weight), and gradually increase the amount of weight you use. You can use the hand and ankle weights sold in sporting-goods stores, or you can use things like milk or water jugs filled with sand or water or socks filled with beans and tied shut at the ends.

There are many alternatives to the exercises shown here. 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 other types of strength exercises. You can also use the special strength-training equipment at a gym or fitness center.

How Much, How Often

- Do strength exercises for all of your major muscle groups at least twice a week, but no more than 3 times per week. Don't do strength exercises of the same muscle group on any 2 days in a row.
- Depending on your condition, you might need to start out using as little as 1 or 2 pounds of weight or no weight at all. Sometimes, the weight of your arms or legs alone is enough to get you started.
- Use a minimum of weight the first week, then gradually add weight. Starting out 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.

How to do Strength Exercises

- Do 8-15 repetitions in a row. Wait a minute, then do another "set" of 8-15 repetitions of the same exercise.
- Take 3 seconds to lift or push a weight into place; hold the position for 1 second, and take another 3 seconds to lower the weight. Don't let the weight drop or let your arms or legs fall in an uncontrolled way; lowering them slowly is very important.
- It should feel somewhere between hard and very hard (Level 15 to 17 on the Borg Scale; review the *MOVE!* handout, "How Hard Should I Exercise", for more information on how to self-monitor the intensity of your activity) for you to lift or push the weight of your limb. It should not feel very, very hard. If you can't lift or



push at least 8 times in a row, it's too heavy for you. Reduce the amount of weight or lift your limb a lower amount. If you can lift more than 15 times in a row without much difficulty, then it's too light for you. You can try increasing the amount of weight or the height to which you are lifting your limb to make the activity more difficult.

- Stretch after strength exercises, as this is when your muscles are warmed up. If you stretch before strength exercises, be sure to warm up your muscles first by light walking and arm pumping.

Safety

- Don't hold your breath or strain during strength exercises. Breathe out as you lift or push, and breathe in as you relax; this may not feel natural at first.
- If you have had your hip or knee joint replaced, check with your doctor before doing the lower body exercises.
- Avoid jerking or thrusting weights into position or "locking" the joints in your arms and legs in a tightly straightened position. This can cause injuries. Use smooth, steady movements.
- 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 are not. The latter symptoms mean you are overdoing it.
- None of the exercises you do should cause pain. The range within which you move your arms and legs should never hurt.

Progressing

- Gradually increasing the amount of weight you use is crucial for building strength.
- When you are able to lift a weight between 8 to 15 times, increase the amount of weight you use at your next session

Here is an example of how to progress gradually start out with a weight that you can lift only 8 times. Keep using that weight until you become strong enough to lift 12 to 15 times. Add more weight so that, again, you can lift it only 8 times. Use this weight until you can lift it 12 to 15 times, then add more weight. Keep repeating.



Sample Schedule

Perform the following exercises, in order, at the recommended frequency.

Detailed instructions for each exercise are provided at the end of this handout and are taken from *Exercise: A Guide from the National Institute on Aging*.

Strength and Balance Exercises	# of repetitions per set	# of sets per session	# of sessions per week
Arm Raise	8-15	2	2-3
Chair Stand	8-15	2	2-3
Biceps Curl	8-15 per side	2 per side	2-3
Plantar Flexion	8-15	2	2-3
Triceps Extension	8-15 per side	2 per side	2-3
Alternative Dip	8-15	2	2-3
Knee Flexion	8-15 per side	2 per side	2-3
Hip Flexion	8-15 per side	2 per side	2-3
Shoulder Flexion	8-15	2	2-3
Knee Extension	8-15 per side	2 per side	2-3
Hip Extension	8-15 per side	2 per side	2-3
Side Leg Raise	8-15 per side	2 per side	2-3

Remember the sequence for each repetition of an exercise:

LIFT to a count of three...

PAUSE to a count of one

LOWER to a count of three

- Decrease the weight or lower how far you are lifting your limb or body if you cannot do at least 8 repetitions in row.
- Increase the weight or raise how far you are lifting your limb or body if you can easily do more than 15 repetitions in a row.
- For this program, proper form is more important than quantity or speed. Make sure you do each exercise safely and properly with the full range of motion.



Finding the Right Intensity

As you stick with the program, the exercises will become too easy and you will need to increase your efforts to continue gaining strength. It is important to find the right balance between being careful when exercising to prevent injury and always progressing to increase strength. The table below will help you find the right intensity for your workout.

Exercise Intensity Indicator* Ask yourself these questions after each exercise:
<p><i>Were you able to complete 2 sets of 8 repetitions in good form?</i></p> <p>No → Reduce the weight so you can lift 8 times in good form; then repeat for a 2nd set → For exercises that don't use weights, decrease height to which you are raising your limb or body.</p> <p>Yes → Please continue to the next question.</p>
<p><i>Could you have done a <u>few</u> more than 15 repetitions in good form without a break?</i></p> <p>Yes → You feel that you can do only a few more repetitions-but not the entire next set of 8-15 without a break. At your next workout, do the first set of repetitions with the current weight you have been using. Then do the second set with a slightly heavier weight. To increase the intensity of exercises that do not use weights, hold for a slightly longer count or lift limb to a higher level.</p>
<p><i>Could you have done the entire 2nd set of 15 repetitions in good form without a break?</i></p> <p>Yes → Use heavier weights for both sets of repetitions the next time you workout. For exercises without weight, hold each repetition for a slightly longer count.</p> <p>The usual recommended count is: "LIFT One-Two-Three" "PAUSE One" "LOWER One-Two-Three"</p> <p>To increase intensity try: "LIFT One-Two-Three" "Pause One-Two-Three" "LOWER One-Two-Three-Four"</p>

*Excerpted and slightly adapted with permission from: Growing Stronger: Strength Training for Older Adults by RA Sequin et al. Published by CDC and Tufts University



Prevention Tips for Sore Muscles or Cramps

Do sore muscles and cramps discourage you from physical activity? Soreness and cramps are simply your muscles adjusting to new activity.

Here are some tips to help fight muscle soreness and cramps:

- **Gradually** increase how often, how hard, and how long you are active.
- Wear appropriate and comfortable shoes and socks for physical activity.
- Drink plenty of water before, during, and after activity.
- Warm-up before and cool-down after each activity (see the handout on warm-up and cool-down).
- Pain relief creams (Bengay[®], Icy Hot[®]), ice, and/or heating pad can offer some relief.
- Do some gentle activity to keep the muscle moving. Doing no activity will make your soreness worse.
- If you're concerned, talk to your primary care provider.



If you do get a muscle cramp:

- Stretch the muscle and hold it until the cramp subsides.
- Massage the cramp area.
- If there is still pain, put ice on the cramped muscle for a few minutes.
- Sometimes changing what you eat and drink can help.
- Talk to your primary care provider.



If you have an injury that is affecting your ability to exercise, talk with your *MOVE!* healthcare team for guidance.

MOVE!

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Action Plan

This week I will _____ (What)
 _____ (How Much)
 _____ (When)
 _____ (How Often)

Circle how sure you are that you can do this action:

1 2 3 4 5 6 7 8 9 10

*If your answer is less than 7, you may not be able to meet your goal.
 Think about modifying your plan to be more doable.*

Give yourself a check mark each day you accomplish your plan	Comments: Write yourself a note about today's activity.
<input type="checkbox"/> Monday	
<input type="checkbox"/> Tuesday	
<input type="checkbox"/> Wednesday	
<input type="checkbox"/> Thursday	
<input type="checkbox"/> Friday	
<input type="checkbox"/> Saturday	
<input type="checkbox"/> Sunday	

Possible road blocks to meeting my plan:

Things I can do to overcome these road blocks:

Other resources I need to meet my action plan:
