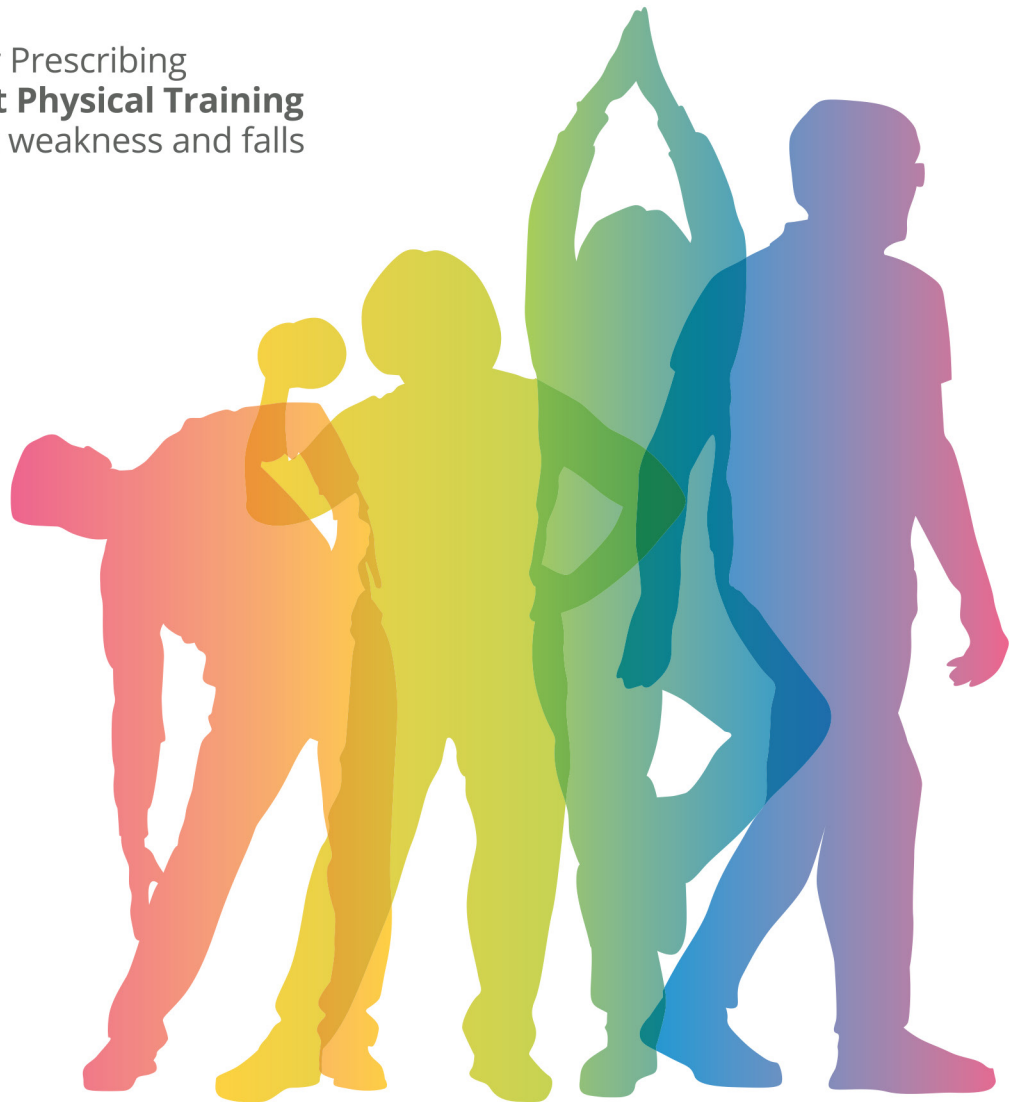


MULTI-COMPONENT
PHYSICAL EXERCISE
PROGRAM

viviFrail[♥]

A Practical Guide for Prescribing
a **Multi-Component Physical Training
Program** to prevent weakness and falls
in **People over 70**



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PHYSICAL EXERCISE
PROGRAM



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CREDITS

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AUTHORS:
Mikel Izquierdo, Alvaro Casas-Herrero, Fabricio Zambom-Ferraresi, Nicolás Martínez-Velilla, Cristina Alonso-Bouzón, Leocadio Rodríguez-Mañas representing VIVIFRAIL (Erasmus+ 556988-EPP-1-2014-1-ES-SPO-SCP)*

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*The Vivifrail consortium includes the following people and organizations: University Hospital of Getafe (Leocadio Rodríguez-Mañas PhD, Md and Cristina Alonso-Bouzón PhD, Md) (Getafe, Madrid, Spain); Diabetes Frail (Alan Sinclair, MD,FRCP) (London, United Kingdom); University of Ulm, (Andrej Zeyfanf, PhD, Md) (Ulm, Germany); Università Cattolica Sacro Cuore (Antonio Sgadari PhD, Md and Roberto Bernabei, PhD, MD) (Rome, Italy); Centre Hospitalier Universitaire de Toulouse (Phillipe Barreto, PhD, MD and Bruno Vellas PhD, MD) (Toulouse, France), Public University of Navarre (Mikel Izquierdo, Phd, Nicolás Martínez-Velilla, PhD, MD and Alvaro Casas-Herrero PhD, MD) (Pamplona, Spain).

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1

Why do we do physical exercise at this age? Introduction to the guide.

Deterioration in muscular strength and mass, cardiovascular resistance and balance leads to a decrease in daily life activities, a higher risk of falling and a loss of independence, among other consequences.

Physical **inactivity** and a **sedentary lifestyle** is one of the primary factors in the loss and deterioration of muscular function.

Multi-component physical exercise programs and, in particular, strength training are the most effective interventions for delaying disability and other adverse events. Likewise, their use has been proven in other fields frequently associated with this syndrome such as falls, cognitive deterioration and depression.

The effects of exercise are potentially similar to those that can be achieved with medication and even better with barely any adverse effects when aiming to prevent cardiovascular disease, decrease the risk of death, prevent diabetes, obesity and improved muscular function and quality of life.

This guide offers a series of exercises that will, depending on the elderly person's functional capacity level (serious limitation, moderate limitation and slight limitation as evaluated by the **SPPB** and a **walking speed test**), work on:

- Arm and leg strength and power.
- Balance and walking, to prevent falls.
- Flexibility.
- Resistance with cardiovascular exercises.

All of the exercises outline the procedure, the guidelines for starting, frequency and progression to be able to correctly monitor the instructions prescribed to the patient and improve their health.

Do not forget about following a healthy diet and, if possible, being careful about the food eaten before and especially after any physical exercise to ensure greater efficacy of the training program.

2

Preliminary medical assessment: absolute and relative contra-indications

A medical check-up is recommended prior to any exercise program in all people over 70 years of age.



However, a complete medical check-up is mandatory if any of the following characteristics are true:

- In the last 6 months:
 - Has the patient experienced chest pain at rest or while doing exercise?
 - Has the patient fainted or experienced a loss of consciousness or a fall preceded by dizziness?
 - Has the patient fallen two or more times?
 - Has the patient lost more than 10% of their weight without meaning to?
- Does the patient have any bone or joint disease that may get worse if they do physical exercise?
- Does the patient have any illness that would be a relative/absolute contra-indication to doing exercise (see below)?



There are some **absolute contra-indications** (they prevent doing any type of exercise) for physical activity. Some of them are:

ABSOLUTE CONTRA-INDICATION

- Acute heart attack (recent 3-6 months) or unstable angina
- Uncontrolled atrial or ventricular arrhythmias
- Aortic dissecting aneurysm
- Severe aortic stenosis
- Acute endocarditis / pericarditis
- Uncontrolled high blood pressure (> 180/100 mmHg)
- Acute thromboembolism
- Acute or severe heart failure
- Acute or severe respiratory failure
- Uncontrolled postural hypotension
- Uncontrolled acute decompensated diabetes mellitus or low blood sugar
- A recent fracture in the last month (strength training)
- Any other circumstance the doctors believes prevents doing physical activity



On the other hand, there are relative **contra-indications** (they may prevent doing one type of exercise or physical activity while another is recommended). If the patient has a temporary illness (bronchitis, flu) or a crisis or exacerbation related to the illness or the treatment, waiting until they have resolved before starting the physical activity again is recommended.

RELATIVE CONTRA-INDICATION

- A recent fracture in the last 3 months (strength training)
- Infections that affect one's general condition
- A pathology that causes serious functional limitation (Barthel scale of less than 20)



- If any **adverse symptom** appears during exercise such as muscular or articular pain, breathlessness, thoracic pain, the program must be stopped and another medical check-up must be performed.
- Adverse events are minimized when the programs are begun with low intensities and slow progressions.



3

Assessment of the functional capacity and determination of the risk of falling

You should begin with the aim of choosing the type of physical exercise program that is best for each person, doing an assessment of their functional capacity is recommended using the **Short Physical Battery Test: SPPB**). This battery test should be performed prior to beginning in order to determine the functional capacity and most adequate exercise program that are most likely to bring about any improvements and be able to make progress. Depending on the result attained and if the person makes progress, work shall begin on the next level.

On the other hand and due to its immense clinical relevance as an indicator of weakness in fragile people, doing a **6 metre walking speed test and a get-up and go test** is recommended. This type of test also helps determine the initial level and monitor the benefits of a physical exercise program.

Finally, four simple steps are suggested to determine the **risk of falling** and be able to prescribe a specific fall prevention program for the elderly.

1. SHORT PHYSICAL PERFORMANCE BATTERY (SPPB)

There are three parts to the short physical performance battery (SPPB): Balance assessment, 4 metre walking assessment and get-up and sit test. The final assessment is obtained by adding together the three parts. Explanations are provided below on how to do each assessment. Depending on the classification obtained, people may be identified with serious limitation (0-4 points), moderate limitation (5-6 points), slight limitation (7-9 points) and minimal limitation (10-12 points). The most recommended type of program is determined based on this score.



BALANCE TEST



ONE FOOT NEXT TO THE OTHER.
 Feet together, one next to the other
1= 10 seconds
0= less than 10 seconds
 ▶ if the score is zero, go directly to the walking speed test



SEMI-TANDEM POSITION.
 The heel of one foot at the height of the thumb on the other side
1= 10 seconds
0= less than 10 seconds
 ▶ if the score is zero, go directly to the walking speed test



TANDEM POSITION.
 The heel of one foot in contact with the tip of the other foot
2= 10 seconds
1= 3 to 9 seconds
0= less than 3 seconds



WALKING SPEED TEST:

Measure the time it takes to walk 3 or 4 metres at a normal pace (use the best time of two attempts)



3m WALKING	POINTS
< 3.625 s	4
3.62 - 4.65 s	3
4.66 - 6.52 s	2
> 6.52 s	1
incapable	0

4m WALKING	POINTS
< 4.82 s	4
4.82 - 6.20 s	3
6.21 - 8.70 s	2
> 8.7 s	1
incapable	0

CHAIR STAND TEST



PRETEST
 The individual must cross their arms over their chest and try to stand up with their arms crossed in that position
0= incapable

CAPABLE



5 REPS
 Measure the time it takes to stand up 5 times from a sitting position with the back straight as quickly as possible with the arms crossed
0= more than 60 seconds or incapable
1= 16.7 - 59 seconds
2= 13.70 - 16.69 seconds
3= 11.20 - 13.69 seconds
4= less than 11.19 seconds

TOTAL MAXIMUM SCORE: 12 points
 BALANCE TEST: 4 points
 WALKING SPEED TEST: 4 points (normal m/sec.)
 CHAIR TEST: 4 points

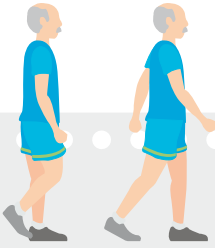
(Adapted from Guralnik JM, et al. A short physical performance battery assessing lower extremity function: association with self-reported disability and prediction of mortality and nursing home admission. J Gerontol Med Sci 1994; 49(2): M85-M:94)

2. 6 METRE WALKING SPEED AND GET-UP AND GO TEST

One of the most commonly used assessments to examine the physical function related to movement is to measure the time required to walk 6 metres at the patient's usual walking speed. Doing two preliminary attempts untimed is recommended in order to get used to the test.

The interpretation of this test is as follows:

- VM >1.1 m/s is considered normal in the elderly who live in a community without any disability
- VM between 0.8 m/s and 1 m/s an indicator of weakness
- VM <0.8 m/s predicts mobility problems and falling
- VM <0.6 m/s also predicts adverse events
- An annual deterioration >0.15 m/s predicts falls



WALKING SPEED (6 metres)

1. Time it takes to walk a distance of 6 metres
2. Usual speed
3. Do 2 preliminary attempts not timed

REQUIREMENTS
A hall measuring at least 6 metres
Good light
A timer
At least 4 walking cycles should be included to detect subtle changes

6 m
10 m

Finally, the Get-up and Go Test combines the assessment of aspects related to strength, balance and walking and is considered a good test for assessing the risk of falling in a frag-



TIME UP AND GO

Stand up without using your arms, walk 3 metres, turn around and sit back down.

TUG <10 s: Normal
TUG 10-20 s: Indicates weakness
TUG >20 seconds: high risk of falling

3 m

ile elderly person. This test consists of measuring the time it takes to get up from a chair without using the arms, walk for 3 metres, turn around and come back to the chair and sit down. A score lower than 10 seconds is normal; between 10 and 20 seconds, it's a sign of weakness and greater than 20 seconds is considered to mean the elderly person has a high risk of falling.

3. FALL RISK ASSESSMENT

The risk of falling is one of the main consequences of weakness and is the cause of 90% of all hip fractures. This event is also fundamental in patients with cognitive deterioration. Doing the following assessment is suggested to be able to detect a high risk of falling and be able to prescribe a specific training program for this type of person (a high risk of one or more of the following):

- 2 or more falls in the last year / 1 fall in the last year requiring medical attention
- Timed Get-up and Go > 20 sec (TUG)
- VM (6m) <0.8 m/s
- Dementia

EVALUATE FALL RISK			
1	2 or more falls in the last year or one fall in the last year requiring medical attention	2	TUG > 20s
		3	VM (6m): < 0.8 m/s
		4	Dementia

Does the patient have one or more of the above characteristics?

YES

- Nutritional Status assessment and intervention
- Drug enhancement
- Intervention with environmental measures
- Reinforcement of the multi-component physical exercise program

Although the multi-component physical exercise programs described in this Guide are useful for all elderly people with slight to moderate functional deterioration and in those with a risk of suffering from it, the adoption of the following additional measures is recommended in the specific case of patients with a history or risk of falls or fractures:



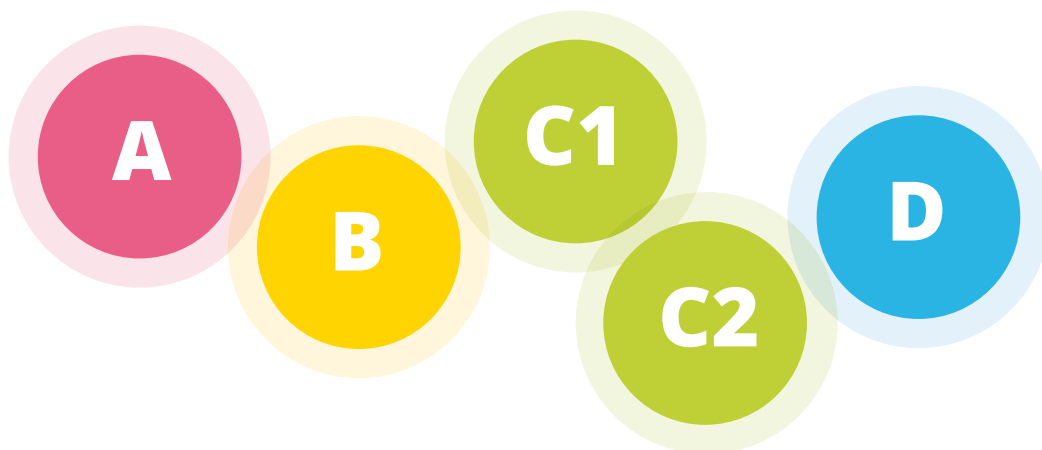
- If there is a vitamin D deficit (<30 ng/ml), supplementing with at least 800 UI if there are no contra-indications should be assessed.
- Adjusting the low blood sugar treatment will be necessary for patients with diabetes.
- Check the number and doses of antihypertensives if there are symptoms of postural hypotension.
- Check and reduce any over-medication, paying special attention to psychiatric drugs. To this end, the use of tools such as START/STOP criteria may be useful.
- A nutritional assessment should be done with fragile patients. One useful screening tool is the MNA. If malnutrition is observed, a protein intake of 1.2-1.5 g/kg/day must be ensured.
- When using protein-calorie supplements, you must remember that the greatest benefit is obtained when combined with a customized multi-component physical exercise program. Taking said supplements must be done after the training session to enhance the benefits.
- Assessing the risk of falling is essential in patients with cognitive problems. Patients with dementia have a high risk of falling and fractures so early intervention is required to prevent them.
- Osteoporosis, falling and fractures must be managed together. Patients with osteoporosis should undergo an assessment to determine the risk of falling and fracture. Moreover, patients with prior fractures should undergo treatment for osteoporosis.
- The main objectives in a patient with a prior fracture should be preventing any deterioration in functional capacity and preventing new falls and fractures.
- It is essential to assess and act on environmental risks at the home (bathtub adaptations, rugs, footwear, etc.) for patients who have been subject to repeated falling.
- All elderly people must undergo a comprehensive geriatric assessment, especially those who are fragile as that is the main tool for detecting problems and making decisions.



4

Types of multi-component training programs to improve functional capacity and the risk of falling in the pre-fragile and and fragile elderly

Different functional capacity levels have been determined based on the scores obtained from the short physical performance battery test (SPPB) and the 6 metre walking speed (See the graph) with each one leading to the recommendation of a certain customized multi-component physical exercise program (Program A, B, C1, C2 or D) (See the graph). Two sub-types have been defined in order to more accurately recommend a particular cardiovascular resistance program for the group with slight limitation (Fragile/Pre-fragile) based on the maximum time they can walk without help. If the person can walk for 10 to 30 minutes, they are known as C1; and if they can walk for 30 to 45 minutes, they are known as C2. The efficacy of these programs will improve if the physical exercise is accompanied by an assessment of the patient's nutritional status and the corresponding nutritional intervention.



FUNCTIONAL ASSESSMENT			
<p>Serious limitation DISABLED</p> <p>Cannot walk. In a wheelchair or bed. They normally cannot remain standing up. Cannot sit up.</p>	<p>Moderate limitation FRAGILE</p> <p>Walks with difficulty or help. Somewhat sits up. Completes balance tests with difficulty.</p>	<p>Slight limitation FRAGILE - PRE-FRAGILE</p> <p>Walks independently. Walking problems. Subtle balance. Some difficulty sitting up 5 times</p>	<p>Minimal limitation or no limitation INDEPENDENT</p>
<p>SPPB 0-3 VM (6m) < 0.5 m/s</p>	<p>SPPB 4-6 VM (6 m) 0.5 - 0.8 m/s</p>	<p>SPPB 7-9 VM (6 m) 0.9 - 1 m/s</p>	<p>SPPB 10-12 VM (6m) > 1 m/s</p>
<p>A</p> <p>Serious limitation Disabled</p> <p>Doing these exercises, you'll be able to get out of the chair</p>	<p>B</p> <p>Moderate limitation Fragile</p> <p>If you do these exercises, you will notice great improvement</p>	<p>Walks 10'-30' 30'-45'</p> <p>C1 C2</p> <p>Slight limitation Fragile Pre-fragile</p> <p>The purpose of these exercises is to continue enjoying walking</p>	<p>D</p> <p>Minimal limitation or no limitation</p> <p>Don't let your guard down! If you stop, you may quickly get worse</p>

On the other hand and as already mentioned above, the adoption of the following additional measures is recommended if the patient has one or more high risk of falling characteristics. One of them which is highly important is reinforcing the multi-component exercise program (Program E) (See graph):

EVALUATE FALL RISK			
<p>1</p> <p>2 or more falls in the last year or one fall in the last year requiring medical attention</p>	<p>2</p> <p>TUG > 20s</p>	<p>3</p> <p>VM (6m): < 0.8 m/s</p>	<p>4</p> <p>Dementia</p>

Does the patient have one or more of the above characteristics?





YES























- Nutritional Status assessment and intervention
- Drug enhancement
- Intervention with environmental measures
- Reinforcement of the multi-component physical program

E



A PROGRAM FOR PATIENTS WITH SERIOUS LIMITATION (PROGRAM A)

Exercises for patients with serious limitation (program A)								
TYPE OF TRAINING	TYPE OF EXERCISES							
Strength and power 								
SEE THE EXERCISE ON PAGE	48	48	49	49	49	50	50	51
Cardiovascular 								
SEE THE EXERCISE ON PAGE	54							
Balance and walking 								
SEE THE EXERCISE ON PAGE	55	55						
Flexibility (standing or sitting) 								
SEE THE EXERCISE ON PAGE	58	58	59	59	59	60	60	

DAILY ORGANIZATION						
M	T	W	Th	F	Sat	Sun
				 arms	 legs (optional)	
						
						
When the elderly person improves their muscular strength, the cardiovascular exercise program shall begin. Add the following exercises to the previous exercises:						
 Once/day	 Twice/day	 Once/day	 Twice/day	 Once/day	 Once/day	 Twice/day



Arm strength and legs



Cardiovascular



Balance and walking



Flexibility

A PROGRAM FOR PATIENTS WITH SERIOUS LIMITATION (PROGRAM A)

WEEKLY ORGANIZATION


Muscular strength		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	2 sets / 10 reps	Determine the exercise or weight that allows them to do the exercise properly about 30 times without stopping yet makes them feel as though they have made an effort by the end.
3 and 4	2 sets / 12-15 reps	
5 and 6	3 sets / 12 reps	
7 and 8	Increase the weight used up to now. 2 sets / 10 reps	Determine the exercise or weight that allows them to do the exercise properly about 20 times without stopping yet makes them feel as though they have made an effort by the end.
9 and 10	2 sets / 12-15 reps	
11 and 12	3 sets / 12-15 reps	




Cardiovascular resistance		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	Walk 5 to 10 sec., rest 10 sec. Repeat 5 to 7 times	Usual walking pace
3 and 4	+ Walk 10 to 15 sec., rest 20 sec. Repeat 5 to 7 times	
5 and 6	Walk 10 to 15 sec., rest 20 sec. Repeat 5 to 7 times	
7 and 8	Walk 15 to 30 sec., rest 20 sec. Repeat 5 to 10 times	
9 and 10	Walk 30 to 45 sec., rest 20 sec. Repeat 5-10 times	
11 and 12	Walk 45 to 60 sec., rest 20 sec. Repeat 12 to 15 times	



WEEKLY ORGANIZATION
























Balance 		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	With help, remain in the same position and count 5-10 with each leg. Do 2 or 3 times	<ul style="list-style-type: none"> • Change the position of your arms; cross your arms or make a cross shape, for example. • Do the exercises on different surfaces; on a rug, for example. • Close your eyes, but only if someone is near to help you.
3 and 4	With help, remain in the same position and count to 10 with each leg. Do 2 or 3 times	
5 and 6	Remain in the same position and count to 15 for each leg. Do 2 or 3 times	
7 and 8	Remain in the same position and count to 20 for each leg. Do 2 or 3 times	
9 and 10	Remain in the same position and count to 25 with each leg. Do 2 or 3 times	
11 and 12	Remain in the same position and count to 30 for each leg. Do 2 or 3 times	

Flexibility 		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	2 sets of 3 reps (remain in the same position for 10 seconds)	<ul style="list-style-type: none"> • Stretch until you feel a bit of tension and then remain in the same position for 10-12 seconds • Stretch without creating any excessive muscular elongation or articular tension <ul style="list-style-type: none"> • Every day. • After the muscular strength and power or cardiovascular exercises
3 and 4		
5 and 6		
7 and 8	3 sets of 3 reps (remaining in the same position for 10 seconds)	
9 and 10		
11 and 12		



PROGRAM FOR PATIENTS WITH SERIOUS LIMITATION AND RISK OF FALLING (PROGRAM A + E)

Exercices for patients with serious limitation and risk of falling (program A + E)								
TYPE OF TRAINING	TYPE OF EXERCISES							
Strength and power 								
SEE THE EXERCISE ON PAGE	48	48	49	49	49	50	50	51
Cardiovascular 								
SEE THE EXERCISE ON PAGE	54							
Balance and walking 								
SEE THE EXERCISE ON PAGE	55	55						
Flexibility (standing or sitting) 								
SEE THE EXERCISE ON PAGE	58	58	59	59	59	60	60	

DAILY ORGANIZATION						
M	T	W	Th	F	Sat	Sun
				 arms	 legs (optional)	
						
						
When the elderly person improves their muscular strength, the cardiovascular exercise program shall begin. Add the following exercises to the previous exercises:						
 Once/day	 Twice/day	 Once/day optional	 Twice/day	 Once/day	 Once/day	 Twice/day



Arm strength and legs



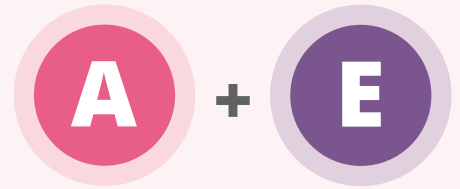
Cardiovascular




Balance and walking




Flexibility




WEEKLY ORGANIZATION


Muscular strength 		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	2 sets / 10 reps	Determine the exercise or weight that allows them to do the exercise properly about 30 times without stopping yet makes them feel as though they have made an effort by the end.
3 and 4	2 sets / 12-15 reps	
5 and 6	3 sets / 12 reps	
7 and 8	Increase the weight used up to now. 2 sets / 10 reps	Determine the exercise or weight that allows them to do the exercise properly about 20 times without stopping yet makes them feel as though they have made an effort by the end.
9 and 10	2 sets / 12-15 reps	
11 and 12	3 sets / 12-15 reps	

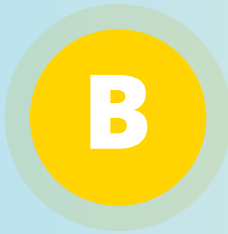
Cardiovascular resistance 		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	Walk 5 to 10 sec., rest 10 sec. Repeat 5 to 7 times	Usual walking pace
3 and 4	+ Walk 10 to 15 sec., rest 20 sec. Repeat 5 to 7 times	
5 and 6	Walk 10 to 15 sec., rest 20 sec. Repeat 5 to 7 times	
7 and 8	Walk 15 to 30 sec., rest 20 sec. Repeat 5 to 10 times	
9 and 10	Walk 30 to 45 sec., rest 20 sec. Repeat 5-10 times	
11 and 12	Walk 45 to 60 sec., rest 20 sec. Repeat 12 to 15 times	

PROGRAM FOR PATIENTS WITH SERIOUS LIMITATION AND RISK OF FALLING (PROGRAM A + E)





WEEKLY ORGANIZATION





















Balance		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	With help, remain in the same position and count 5-10 with each leg. Do 2 or 3 times	<ul style="list-style-type: none"> • Change the position of your arms; cross your arms or make a cross shape, for example. • Do the exercises on different surfaces; on a rug, for example. • Close your eyes, but only if someone is near to help you.
3 and 4	With help, remain in the same position and count to 10 with each leg. Do 2 or 3 times	
5 and 6	Remain in the same position and count to 15 for each leg. Do 2 or 3 times	
7 and 8	Remain in the same position and count to 20 for each leg. Do 2 or 3 times	
9 and 10	Remain in the same position and count to 25 with each leg. Do 2 or 3 times	
11 and 12	Remain in the same position and count to 30 for each leg. Do 2 or 3 times	

Flexibility		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	2 sets of 3 reps (remain in the same position for 10 seconds)	<ul style="list-style-type: none"> • Stretch until you feel a bit of tension and then remain in the same position for 10-12 seconds • Stretch without creating any excessive muscular elongation or articular tension <ul style="list-style-type: none"> • Every day. • After the muscular strength and power or cardiovascular exercises
3 and 4		
5 and 6		
7 and 8	3 sets of 3 reps (remaining in the same position for 10 seconds)	
9 and 10		
11 and 12		



A PROGRAM FOR PATIENTS WITH MODERATE LIMITATION (PROGRAM B)

Exercises for patients with moderate limitation (program B)										
TYPE OF TRAINING	TYPE OF EXERCISES									
Strength and power 										
SEE THE EXERCISE ON PAGE	48	48	49	49	49	50	51	52	52	53
Cardiovascular 										
SEE THE EXERCISE ON PAGE	54									
Balance and walking 										
SEE THE EXERCISE ON PAGE	55	55	55	56						
Flexibility (standing or sitting) 										
SEE THE EXERCISE ON PAGE	58	58	59	59	59	60	60	60		

DAILY ORGANIZATION						
M	T	W	Th	F	Sat	Sun
				 arms	 legs (optional)	
						
 Once/day	 Twice/day	 Once/day	 Twice/day	 Twice/day	 Once/day	 Twice/day



Arm strength and legs



Cardiovascular




Balance and walking




Flexibility


A PROGRAM FOR PATIENTS WITH MODERATE LIMITATION (PROGRAM B)


WEEKLY ORGANIZATION

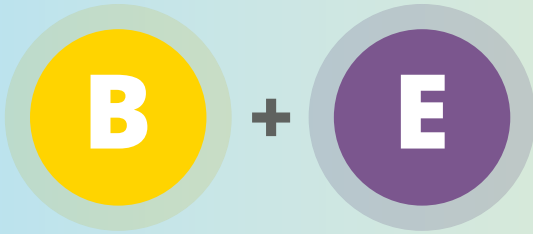
Muscular strength 		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	2 sets / 10 reps	Determine the exercise or weight that allows them to do the exercise properly about 30 times without stopping yet makes them feel as though they have made an effort by the end.
3 and 4	2 sets / 12-15 reps	
5 and 6	3 sets / 12 reps	
7 and 8	Increase the weight used up to now. 2 sets / 10 reps	Determine the exercise or weight that allows them to do the exercise properly about 20 times without stopping yet makes them feel as though they have made an effort by the end.
9 and 10	2 sets / 12-15 reps	
11 and 12	3 sets / 12-15 reps	

Cardiovascular resistance 		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	Walk 20 sec., rest 10 sec. Repeat 5 to 7 times + Walk 25 to 30 sec., rest 20 sec. Repeat 5 to 7 times	Usual walking pace
3 and 4		
5 and 6	Walk 20 to 25 sec., rest 20 sec. Repeat 5 to 7 times + Walk 25 to 35 sec., rest 20 sec. Repeat 10 to 15 times	
7 and 8	Walk 25 to 35 sec., rest 20 sec. Repeat 5 times + Walk 35 to 45 sec., rest 20 sec. Repeat 8 to 12 times	
9 and 10	Walk 45 sec., rest 20 sec. Repeat 5 times + Walk 60 sec., rest 20 sec. Repeat 6 to 8 times	
11 and 12	Walk 50 to 70 sec., rest 20 sec. Repeat 12 to 15 times	





WEEKLY ORGANIZATION






















Balance		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	Remain in the same position and count to 10 with each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg.	<ul style="list-style-type: none"> • Change the position of your arms; cross your arms or make a cross shape, for example. • Do the exercises on different surfaces; on a rug, for example. • Close your eyes, but only if someone is near to help you.
3 and 4	Remain in the same position and count to 15 for each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg.	
5 and 6	Remain in the same position and count to 20 for each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg.	
7 and 8	Remain in the same position and count to 30 for each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg	
9 and 10	Walk one set of 10 steps. Stop and rest 10 seconds without sitting. Rest no less than one minute and no more than 3 minutes. Repeat	
11 and 12	Walk in a relaxed way and step over the obstacles. Set up 5 obstacles to begin. When you finish the walk, begin again. Repeat 8 times.	

Flexibility		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	2 sets of 3 reps (remain in the same position for 10 seconds)	<ul style="list-style-type: none"> • Stretch until you feel a bit of tension and then remain in the same position for 10-12 seconds • Stretch without creating any excessive muscular elongation or articular tension <ul style="list-style-type: none"> • Every day • After the muscular strength and power or cardiovascular exercises
3 and 4		
5 and 6		
7 and 8	3 sets of 3 reps (remaining in the same position for 10 seconds)	
9 and 10		
11 and 12		



PROGRAM FOR PATIENTS WITH MODERATE LIMITATION AND RISK OF FALLING (PROGRAM B + E)

Exercises for patients with moderate limitation and risk of falling (program B + E)										
TYPE OF TRAINING	TYPE OF EXERCISES									
Strength and power 										
SEE THE EXERCISE ON PAGE	48	48	49	49	49	50	51	52	52	53
Cardiovascular 										
SEE THE EXERCISE ON PAGE	54									
Balance and walking 										
SEE THE EXERCISE ON PAGE	55	55	55	56						
Flexibility (standing or sitting) 										
SEE THE EXERCISE ON PAGE	58	58	59	59	59	60	60	60		

DAILY ORGANIZATION						
M	T	W	Th	F	Sat	Sun
				 arms	 legs	
						
						
Once/day	Twice/day	Once/day optional	Twice/day	Twice/day	Once/day	Twice/day



Arm strength and legs



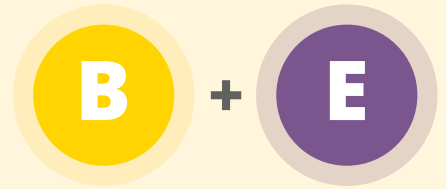
Cardiovascular




Balance and walking




Flexibility




WEEKLY ORGANIZATION


Muscular strength 		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	2 sets / 10 reps	Determine the exercise or weight that allows them to do the exercise properly about 30 times without stopping yet makes them feel as though they have made an effort by the end.
3 and 4	2 sets / 12-15 reps	
5 and 6	3 sets / 12 reps	
7 and 8	Increase the weight used up to now. 2 sets / 10 reps	Determine the exercise or weight that allows them to do the exercise properly about 20 times without stopping yet makes them feel as though they have made an effort by the end.
9 and 10	2 sets / 12-15 reps	
11 and 12	3 sets / 12-15 reps	

Cardiovascular resistance 		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	Walk 20 sec., rest 10 sec. Repeat 5 to 7 times + Walk 25 to 30 sec., rest 20 sec. Repeat 5 to 7 times	Usual walking pace
3 and 4		
5 and 6	Walk 20 to 25 sec., rest 20 sec. Repeat 5 to 7 times + Walk 25 to 35 sec., rest 20 sec. Repeat 10 to 15 times	
7 and 8	Walk 25 to 35 sec., rest 20 sec. Repeat 5 times + Walk 35 to 45 sec., rest 20 sec. Repeat 8 to 12 times	
9 and 10	Walk 45 sec., rest 20 sec. Repeat 5 times + Walk 60 sec., rest 20 sec. Repeat 6 to 8 times	
11 and 12	Walk 50 to 70 sec., rest 20 sec. Repeat 12 to 15 times	

PROGRAM FOR PATIENTS WITH MODERATE LIMITATION AND RISK OF FALLING (PROGRAM B + E)





WEEKLY ORGANIZATION
























Balance		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	Remain in the same position and count to 10 with each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg.	 <ul style="list-style-type: none"> • Change the position of your arms; cross your arms or make a cross shape, for example. • Do the exercises on different surfaces; on a rug, for example. • Close your eyes, but only if someone is near to help you.
3 and 4	Remain in the same position and count to 15 for each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg.	
5 and 6	Remain in the same position and count to 20 for each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg.	
7 and 8	Remain in the same position and count to 30 for each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg	
9 and 10	Walk one set of 10 steps. Stop and rest 10 seconds without sitting. Rest no less than one minute and no more than 3 minutes. Repeat	
11 and 12	Walk in a relaxed way and step over the obstacles. Set up 5 obstacles to begin. When you finish the walk, begin again. Repeat 8 times.	

Flexibility		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	2 sets of 3 reps (remain in the same position for 10 seconds)	 <ul style="list-style-type: none"> • Stretch until you feel a bit of tension and then remain in the same position for 10-12 seconds • Stretch without creating any excessive muscular elongation or articular tension • Every day • After the muscular strength and power or cardiovascular exercises
3 and 4		
5 and 6		
7 and 8	3 sets of 3 reps (remaining in the same position for 10 seconds)	
9 and 10		
11 and 12		

C1

A PROGRAM FOR PATIENTS WITH SLIGHT LIMITATION (PROGRAM C1)

A program for patients with slight limitation (program C1)										
TYPE OF TRAINING	TYPE OF EXERCISES									
Strength and power 										
SEE THE EXERCISE ON PAGE	48	48	49	49	49	51	52	52	53	53
Cardiovascular 										
SEE THE EXERCISE ON PAGE	54									
Balance and walking 										
SEE THE EXERCISE ON PAGE	55	55	55	56	56	56	57			
Flexibility 										
SEE THE EXERCISE ON PAGE	58	58	59	59	59	60	60	60		

DAILY ORGANIZATION						
M	T	W	Th	F	Sat	Sun
						
						
						
						
Once/day	Once/day	Once/day	Once/day	Once/day	Once/day	Once/day



Arm strength and legs



Cardiovascular



Balance and walking



Flexibility

A PROGRAM FOR PATIENTS WITH SLIGHT LIMITATION (PROGRAM C1)

WEEKLY ORGANIZATION


Muscular strength		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	2 sets / 10 reps	Determine the exercise or dumbbell weight or elastic band resistance that allows them to do the exercise properly about 30 times without stopping yet makes them feel as though they have made an effort by the end.
3 and 4	2 sets / 12-15 reps	
5 and 6	3 sets / 12 reps	
7 and 8	Increase the weight used up to now. 2 sets / 10 reps	
9 and 10	2 sets / 12-15 reps	
11 and 12	3 sets / 12-15 reps	



Cardiovascular resistance		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	Walk 3-4 minutes, rest 30 sec. Begin walking again and walk for 4-5 more minutes.	Usual walking pace
3 and 4	Walk 5 minutes, rest 30 sec. Begin walking again and walk for 5 more minutes.	
5 and 6	Walk 5 minutes, rest 30 sec. Begin walking again and walk for 5 minutes and then rest 30 sec. Begin walking again and walk for 5 more minutes.	
7 and 8	Walk 5-7 minutes, rest 30 sec. Begin walking again and walk for 5-7 minutes and then rest 30 sec. Begin walking again and walk for 5-7 more minutes.	
9 and 10	Walk 7 to 12 minutes once a day.	
11 and 12	Walk 12 to 20 minutes, once a day.	




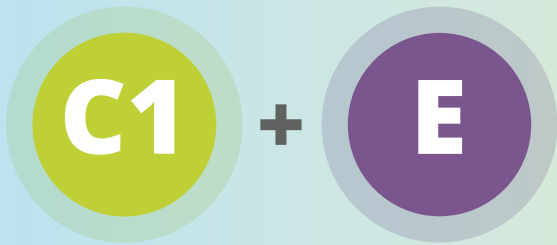
WEEKLY ORGANIZATION

Balance		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	<p>Remain in the same position and count to 10 with each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg.</p> <p>+</p> <p>Walk one set of 10 steps. Stop and rest 10 seconds without sitting. Rest no less than one minute and no more than 3 minutes. Repeat.</p> <p>+</p> <p>Walk in a relaxed way and step over the obstacles. Set up 5 obstacles to begin. When you finish the walk, begin again. Repeat 8 times.</p>	<ul style="list-style-type: none"> • Change the position of your arms; cross your arms or make a cross shape, for example. • Do the exercises on different surfaces; on a rug, for example. • Close your eyes, but only if someone is near to help you.
3 and 4	<p>Remain in the same position and count to 15 for each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg.</p> <p>+</p> <p>Walk one set of 10 steps. Stop and rest 10 seconds without sitting. Rest no less than one minute and no more than 3 minutes. Repeat.</p> <p>+</p> <p>Walk in a relaxed way and step over the obstacles. Set up 5 obstacles to begin. When you finish the walk, begin again. Repeat 8 times.</p>	
5 and 6	<p>Remain in the same position and count to 20 for each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg.</p> <p>+ Walk one set of 10 steps. Stop and rest 10 seconds without sitting. Rest no less than one minute and no more than 3 minutes. Repeat.</p> <p>+</p> <p>Walk in a relaxed way and step over the obstacles. Set up 5 obstacles to begin. When you finish the walk, begin again. Repeat 8 times.</p>	
7 and 8	<p>Remain in the same position and count to 30 for each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg</p> <p>+</p>	
9 and 10	<p>Walk one set of 10 steps. Stop and rest 10 seconds without sitting. Rest no less than one minute and no more than 3 minutes. Repeat</p> <p>+</p>	
11 and 12	<p>Walk in a relaxed way and step over the obstacles. Set up 5 obstacles to begin. When you finish the walk, begin again. Repeat 8 times.</p>	





**A PROGRAM FOR PATIENTS
WITH SLIGHT LIMITATION (PROGRAM C1)**


























WEEKLY ORGANIZATION

Flexibility		
		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	2 sets of 3 reps (remain in the same position for 10 seconds)	<ul style="list-style-type: none"> • Stretch until you feel a bit of tension and then remain in the same position for 10-12 seconds • Stretch without creating any excessive muscular elongation or articular tension <ul style="list-style-type: none"> • Every day. • After the muscular strength and power or cardiovascular exercises
3 and 4		
5 and 6		
7 and 8	3 sets of 3 reps (remaining in the same position for 10 seconds)	
9 and 10		
11 and 12		



PROGRAM FOR PATIENTS WITH SLIGHT LIMITATION AND RISK OF FALLING (PROGRAM C1 + E)

Exercices for patients with slight limitation and risk of falling (program C1 + E)										
TYPE OF TRAINING	TYPE OF EXERCISES									
Strength and power 										
SEE THE EXERCISE ON PAGE	48	48	49	49	49	51	52	52	53	53
Cardiovascular 										
SEE THE EXERCISE ON PAGE	54									
Balance and walking 										
SEE THE EXERCISE ON PAGE	55	55	55	56	56	57				
Flexibility (standing or sitting) 										
SEE THE EXERCISE ON PAGE	58	58	59	59	59	60	60	60		

DAILY ORGANIZATION						
M	T	W	Th	F	Sat	Sun
						
						
						
						
Once/day	Once/day	Once/day	Once/day	Once/day	Once/day	Once/day



Arm strength and legs



Cardiovascular




Balance and walking




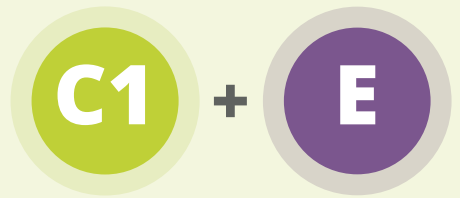
Flexibility

PROGRAM FOR PATIENTS WITH SLIGHT LIMITATION AND RISK OF FALLING (PROGRAM C1 + E)


WEEKLY ORGANIZATION

Muscular strength		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	2 sets / 10 reps	Determine the exercise or dumbbell weight or elastic band resistance that allows them to do the exercise properly about 30 times without stopping yet makes them feel as though they have made an effort by the end.
3 and 4	2 sets / 12-15 reps	
5 and 6	3 sets / 12 reps	
7 and 8	Increase the weight used up to now. 2 sets / 10 reps	Determine the exercise or dumbbell weight or elastic band resistance that allows them to do the exercise properly about 20 times without stopping yet makes them feel as though they have made an effort by the end.
9 and 10	2 sets / 12-15 reps	
11 and 12	3 sets / 12-15 reps	

Cardiovascular resistance		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	Walk 3-4 minutes, rest 30 sec. Begin walking again and walk for 4-5 more minutes.	Usual walking pace
3 and 4	Walk 5 minutes, rest 30 sec. Begin walking again and walk for 5 more minutes	
5 and 6	Walk 5 minutes, rest 30 sec. Begin walking again and walk for 5 minutes and then rest 30 sec. Begin walking again and walk for 5 more minutes.	
7 and 8	Walk 5-7 minutes, rest 30 sec. Begin walking again and walk for 5-7 minutes and then rest 30 sec. Begin walking again and walk for 5-7 more minutes	
9 and 10	Walk 7 to 12 minutes a day	
11 and 12	Walk 12 to 20 minutes, once a day	




WEEKLY ORGANIZATION

Balance		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	Remain in the same position and count to 10 with each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg.	<ul style="list-style-type: none"> • Change the position of your arms; cross your arms or make a cross shape, for example. • Do the exercises on different surfaces; on a rug, for example. • Close your eyes, but only if someone is near to help you.
	+ Walk one set of 10 steps. Stop and rest 10 seconds without sitting. Rest no less than one minute and no more than 3 minutes. Repeat.	
	+ Walk in a relaxed way and step over the obstacles. Set up 5 obstacles to begin. When you finish the walk, begin again. Repeat 8 times.	
3 and 4	Remain in the same position and count to 15 for each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg.	
	+ Walk one set of 10 steps. Stop and rest 10 seconds without sitting. Rest no less than one minute and no more than 3 minutes. Repeat.	
	+ Walk in a relaxed way and step over the obstacles. Set up 5 obstacles to begin. When you finish the walk, begin again. Repeat 8 times.	
5 and 6	Remain in the same position and count to 20 for each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg.	
	+ Walk one set of 10 steps. Stop and rest 10 seconds without sitting. Rest no less than one minute and no more than 3 minutes. Repeat.	
	+ Walk in a relaxed way and step over the obstacles. Set up 5 obstacles to begin. When you finish the walk, begin again. Repeat 8 times.	
7 and 8	Remain in the same position and count to 30 for each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg.	
9 and 10	+ Walk one set of 10 steps. Stop and rest 10 seconds without sitting. Rest no less than one minute and no more than 3 minutes. Repeat.	
11 and 12	+ Walk in a relaxed way and step over the obstacles. Set up 5 obstacles to begin. When you finish the walk, begin again. Repeat 8 times.	





PROGRAM FOR PATIENTS WITH SLIGHT LIMITATION AND RISK OF FALLING (PROGRAM C1 + E)
















WEEKLY ORGANIZATION

Flexibility 		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	2 sets of 3 reps (remain in the same position for 10 seconds)	<ul style="list-style-type: none"> • Stretch until you feel a bit of tension and then remain in the same position for 10-12 seconds • Stretch without creating any excessive muscular elongation or articular tension <ul style="list-style-type: none"> • Every day. • After the muscular strength and power or cardiovascular exercises
3 and 4		
5 and 6		
7 and 8	3 sets of 3 reps (remaining in the same position for 10 seconds)	
9 and 10		
11 and 12		



A PROGRAM FOR PATIENTS WITH SLIGHT LIMITATION (PROGRAM C2)

Exercises for patients with slight limitation (program C2)										
TYPE OF TRAINING	TYPE OF EXERCISES									
Strength and power 										
SEE THE EXERCISE ON PAGE	48	48	49	49	49	51	52	52	53	53
Cardiovascular 										
SEE THE EXERCISE ON PAGE	54									
Balance and walking 										
SEE THE EXERCISE ON PAGE	55	55	55	56	56	56	57			
Flexibility 										
SEE THE EXERCISE ON PAGE	58	58	59	59	59	60	60	60		

DAILY ORGANIZATION						
M	T	W	Th	F	Sat	Sun
						
					legs (optional)	
						
Once/day	Once/day	Once/day	Once/day	Once/day	Once/day	Once/day



Arm strength and legs



Cardiovascular



Balance and walking




Flexibility


A PROGRAM FOR PATIENTS WITH SLIGHT LIMITATION (PROGRAM C2)

WEEKLY ORGANIZATION

Muscular strength		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	2 sets / 10 reps	Determine the exercise or dumbbell weight or elastic band resistance that allows them to do the exercise properly about 30 times without stopping yet makes them feel as though they have made an effort by the end.
3 and 4	2 sets / 12-15 reps	
5 and 6	3 sets / 12 reps	
7 and 8	Increase the weight used up to now. 2 sets / 10 reps	Determine the exercise or dumbbell weight or elastic band resistance that allows them to do the exercise properly about 20 times without stopping yet makes them feel as though they have made an effort by the end.
9 and 10	2 sets / 12-15 reps	
11 and 12	3 sets / 12-15 reps	


Cardiovascular resistance		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	Walk 8 minutes, rest 30 sec. Begin walking again and walk for 10 more minutes.	Usual walking pace
3 and 4	Walk 10 minutes, rest 30 sec. Begin walking again and walk for 10 more minutes.	
5 and 6	Walk 10 minutes, rest 30 sec. Begin walking again and walk for 10 minutes and then rest 30 sec. Begin walking again and walk for 5 more minutes.	
7 and 8	Walk 15 to 25 minutes, once a day.	
9 and 10	Walk 25 to 30 minutes, once a day.	
11 and 12	Walk 30 to 40 minutes, once a day.	

WEEKLY ORGANIZATION

Balance		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	<p>Remain in the same position and count to 10 with each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg.</p> <p style="text-align: center;">+</p> <p>Walk one set of 10 steps. Stop and rest 10 seconds without sitting. Rest no less than one minute and no more than 3 minutes. Repeat.</p> <p style="text-align: center;">+</p> <p>Walk in a relaxed way and step over the obstacles. Set up 5 obstacles to begin. When you finish the walk, begin again. Repeat 8 times.</p>	<ul style="list-style-type: none"> • Change the position of your arms; cross your arms or make a cross shape, for example. • Do the exercises on different surfaces; on a rug, for example. • Close your eyes, but only if someone is near to help you.
3 and 4	<p>Remain in the same position and count to 15 for each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg.</p> <p style="text-align: center;">+</p> <p>Walk one set of 10 steps. Stop and rest 10 seconds without sitting. Rest no less than one minute and no more than 3 minutes. Repeat.</p> <p style="text-align: center;">+</p> <p>Walk in a relaxed way and step over the obstacles. Set up 5 obstacles to begin. When you finish the walk, begin again. Repeat 8 times.</p>	
5 and 6	<p>Remain in the same position and count to 20 for each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg.</p> <p style="text-align: center;">+</p> <p>Walk one set of 10 steps. Stop and rest 10 seconds without sitting. Rest no less than one minute and no more than 3 minutes. Repeat.</p> <p style="text-align: center;">+</p> <p>Walk in a relaxed way and step over the obstacles. Set up 5 obstacles to begin. When you finish the walk, begin again. Repeat 8 times.</p>	
7 and 8	<p>Remain in the same position and count to 30 for each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg.</p> <p style="text-align: center;">+</p>	
9 and 10	<p>Walk one set of 10 steps. Stop and rest 10 seconds without sitting. Rest no less than one minute and no more than 3 minutes. Repeat.</p> <p style="text-align: center;">+</p>	
11 and 12	<p>Walk in a relaxed way and step over the obstacles. Set up 5 obstacles to begin. When you finish the walk, begin again. Repeat 8 times.</p>	





**A PROGRAM FOR PATIENTS
WITH SLIGHT LIMITATION (PROGRAM C2)**

























WEEKLY ORGANIZATION

Flexibility 		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	2 sets of 3 reps (remain in the same position for 10 seconds)	<ul style="list-style-type: none"> • Stretch until you feel a bit of tension and then remain in the same position for 10-12 seconds • Stretch without creating any excessive muscular elongation or articular tension <ul style="list-style-type: none"> • Every day. • After the muscular strength and power or cardiovascular exercises
3 and 4		
5 and 6		
7 and 8	3 sets of 3 reps (remaining in the same position for 10 seconds)	
9 and 10		
11 and 12		



PROGRAM FOR PATIENTS WITH SLIGHT LIMITATION AND RISK OF FALLING (PROGRAM C2)

Exercises for patients with slight limitation and risk of falling (program C2 + E)										
TYPE OF TRAINING	TYPE OF EXERCISES									
Strength and power 										
SEE THE EXERCISE ON PAGE	48	48	49	49	49	51	52	52	53	53
Cardiovascular 										
SEE THE EXERCISE ON PAGE	54									
Balance and walking 										
SEE THE EXERCISE ON PAGE	55	55	55	56	56	56	57			
Flexibility (standing or sitting) 										
SEE THE EXERCISE ON PAGE	58	58	59	59	59	60	60	60		

DAILY ORGANIZATION						
M	T	W	Th	F	Sat	Sun
						
						
						
						
Once/day	Once/day	Once/day	Once/day	Once/day	Once/day	Once/day



Arm strength and legs



Cardiovascular




Balance and walking



Flexibility

PROGRAM FOR PATIENTS WITH SLIGHT LIMITATION AND RISK OF FALLING (PROGRAM C2)

WEEKLY ORGANIZATION

Muscular strength		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	2 sets / 10 reps	Determine the exercise or dumbbell weight or elastic band resistance that allows them to do the exercise properly about 30 times without stopping yet makes them feel as though they have made an effort by the end.
3 and 4	2 sets / 12-15 reps	
5 and 6	3 sets / 12 reps	
7 and 8	Increase the weight used up to now. 2 sets / 10 reps	Determine the exercise or dumbbell weight or elastic band resistance that allows them to do the exercise properly about 20 times without stopping yet makes them feel as though they have made an effort by the end.
9 and 10	2 sets / 12-15 reps	
11 and 12	3 sets / 12-15 reps	

Cardiovascular resistance		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	Walk 8 minutes, rest 30 sec. Begin walking again and walk for 10 more minutes.	Usual walking pace
3 and 4	Walk 10 minutes, rest 30 sec. Begin walking again and walk for 10 more minutes.	
5 and 6	Walk 10 minutes, rest 30 sec. Begin walking again and walk for 10 minutes and then rest 30 sec. Begin walking again and walk for 5 more minutes.	
7 and 8	Walk 15 to 25 minutes, once a day.	
9 and 10	Walk 25 to 30 minutes, once a day.	
11 and 12	Walk 30 to 40 minutes, once a day.	




WEEKLY ORGANIZATION

Balance		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	<p>Remain in the same position and count to 10 with each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg.</p> <p>+ Walk one set of 10 steps. Stop and rest 10 seconds without sitting. Rest no less than one minute and no more than 3 minutes. Repeat.</p> <p>+ Walk in a relaxed way and step over the obstacles. Set up 5 obstacles to begin. When you finish the walk, begin again. Repeat 8 times.</p>	<ul style="list-style-type: none"> • Change the position of your arms; cross your arms or make a cross shape, for example. • Do the exercises on different surfaces; on a rug, for example. • Close your eyes, but only if someone is near to help you.
3 and 4	<p>Remain in the same position and count to 15 for each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg.</p> <p>+ Walk one set of 10 steps. Stop and rest 10 seconds without sitting. Rest no less than one minute and no more than 3 minutes. Repeat.</p> <p>+ Walk in a relaxed way and step over the obstacles. Set up 5 obstacles to begin. When you finish the walk, begin again. Repeat 8 times.</p>	
5 and 6	<p>Remain in the same position and count to 20 for each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg.</p> <p>+ Walk one set of 10 steps. Stop and rest 10 seconds without sitting. Rest no less than one minute and no more than 3 minutes. Repeat.</p> <p>+ Walk in a relaxed way and step over the obstacles. Set up 5 obstacles to begin. When you finish the walk, begin again. Repeat 8 times.</p>	
7 and 8	<p>Remain in the same position and count to 30 for each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg.</p> <p>+ Walk one set of 10 steps. Stop and rest 10 seconds without sitting. Rest no less than one minute and no more than 3 minutes. Repeat.</p> <p>+ Walk in a relaxed way and step over the obstacles. Set up 5 obstacles to begin. When you finish the walk, begin again. Repeat 8 times.</p>	
9 and 10	<p>Remain in the same position and count to 30 for each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg.</p> <p>+ Walk one set of 10 steps. Stop and rest 10 seconds without sitting. Rest no less than one minute and no more than 3 minutes. Repeat.</p> <p>+ Walk in a relaxed way and step over the obstacles. Set up 5 obstacles to begin. When you finish the walk, begin again. Repeat 8 times.</p>	
11 and 12	<p>Remain in the same position and count to 30 for each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg.</p> <p>+ Walk one set of 10 steps. Stop and rest 10 seconds without sitting. Rest no less than one minute and no more than 3 minutes. Repeat.</p> <p>+ Walk in a relaxed way and step over the obstacles. Set up 5 obstacles to begin. When you finish the walk, begin again. Repeat 8 times.</p>	





PROGRAM FOR PATIENTS WITH SLIGHT LIMITATION AND RISK OF FALLING (PROGRAM C2)
















WEEKLY ORGANIZATION

Flexibility 		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	2 sets of 3 reps (remain in the same position for 10 seconds)	<ul style="list-style-type: none"> • Stretch until you feel a bit of tension and then remain in the same position for 10-12 seconds • Stretch without creating any excessive muscular elongation or articular tension <ul style="list-style-type: none"> • Every day. • After the muscular strength and power or cardiovascular exercises
3 and 4		
5 and 6		
7 and 8	3 sets of 3 reps (remaining in the same position for 10 seconds)	
9 and 10		
11 and 12		



A PROGRAM FOR PATIENTS WITH NO LIMITATION (PROGRAM D)

Exercises for patients with no limitation (program D)											
ART DES TRAININGS	ART DER ÜBUNGEN										
Kraft und Muskelstärke 											
ÜBUNG AUF SEITE	48	48	49	49	49	51	52	52	53	53	53
Kardiovaskulär 											
ÜBUNG AUF SEITE	54										
Gleichgewicht und Gang 											
ÜBUNG AUF SEITE	55	55	55	56	56	57	56	57			
Dehnen 											
ÜBUNG AUF SEITE	58	58	59	59	59	60	60	60			

DAILY ORGANIZATION						
M	T	W	Th	F	Sat	Sun
 		 		 arms 	 legs 	
 Once/day	 Once/day	 Once/day	 Once/day	 Once/day	 Once/day	 Once/day



Arm strength and legs



Cardiovascular




Balance and walking




Flexibility


A PROGRAM FOR PATIENTS WITH NO LIMITATION (PROGRAM D)

WEEKLY ORGANIZATION

Muscular strength 		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	2 sets / 10 reps	Determine the exercise or dumbbell weight or elastic band resistance that allows them to do the exercise properly about 30 times without stopping yet makes them feel as though they have made an effort by the end.
3 and 4	2 sets / 12-15 reps	
5 and 6	3 sets / 12 reps	
7 and 8	Increase the weight used up to now. 2 sets / 10 reps	Determine the exercise or dumbbell weight or elastic band resistance that allows them to do the exercise properly about 20 times without stopping yet makes them feel as though they have made an effort by the end.
9 and 10	2 sets / 12-15 reps	
11 and 12	3 sets / 12-15 reps	


Cardiovascular resistance 		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	Walk 15 minutes, rest 30 sec. Begin walking again and walk for 15 more minutes.	Usual walking pace
3 and 4	Walk 15 minutes, rest 30 sec. Walk for 15 more minutes. Rest 30 sec. Walk for 15 more minutes	
5 and 6	Walk 20 minutes, rest 30 sec. Walk for 20 more minutes. Rest 30 sec. Walk for 15 more minutes	
7 and 8	Walk 20 minutes, rest 60 sec. Walk for 20 more minutes, rest 60 sec. Walk for 15 minutes. Rest	
9 and 10	Walk 30-35 minutes, rest 60 sec. Walk for 30-35 more minutes	
11 and 12	Walk 50 to 70 minutes once a day	

WEEKLY ORGANIZATION

Balance		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	<p>Remain in the same position and count to 10 with each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg.</p> <p style="text-align: center;">+</p> <p>Walk one set of 10 steps. Stop and rest 10 seconds without sitting. Rest no less than one minute and no more than 3 minutes. Repeat.</p> <p style="text-align: center;">+</p> <p>Walk in a relaxed way and step over the obstacles. Set up 5 obstacles to begin. When you finish the walk, begin again. Repeat 8 times.</p>	<ul style="list-style-type: none"> • Change the position of your arms; cross your arms or make a cross shape, for example. • Do the exercises on different surfaces; on a rug, for example. • Close your eyes, but only if someone is near to help you.
3 and 4	<p>Remain in the same position and count to 15 for each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg.</p> <p style="text-align: center;">+</p> <p>Walk one set of 10 steps. Stop and rest 10 seconds without sitting. Rest no less than one minute and no more than 3 minutes. Repeat.</p> <p style="text-align: center;">+</p> <p>Walk in a relaxed way and step over the obstacles. Set up 5 obstacles to begin. When you finish the walk, begin again. Repeat 8 times.</p>	
5 and 6	<p>Remain in the same position and count to 20 for each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg.</p> <p style="text-align: center;">+</p> <p>Walk one set of 10 steps. Stop and rest 10 seconds without sitting. Rest no less than one minute and no more than 3 minutes. Repeat.</p> <p style="text-align: center;">+</p> <p>Walk in a relaxed way and step over the obstacles. Set up 5 obstacles to begin. When you finish the walk, begin again. Repeat 8 times.</p>	
7 and 8	<p>Remain in the same position and count to 30 for each leg. Rest no less than one minute and no more than 3 minutes. Repeat with each leg</p> <p style="text-align: center;">+</p>	
9 and 10	<p>Walk one set of 10 steps. Stop and rest 10 seconds without sitting. Rest no less than one minute and no more than 3 minutes. Repeat</p> <p style="text-align: center;">+</p>	
11 and 12	<p>Walk in a relaxed way and step over the obstacles. Set up 5 obstacles to begin. When you finish the walk, begin again. Repeat 8 times.</p>	

**A PROGRAM FOR PATIENTS
WITH NO LIMITATION (PROGRAM D)**

WEEKLY ORGANIZATION

Flexibility 		
WEEK	SETS AND REPS	INTENSITY AND PROGRESSION
1 and 2	2 sets of 3 reps (remain in the same position for 10 seconds)	<ul style="list-style-type: none"> • Stretch until you feel a bit of tension and then remain in the same position for 10-12 seconds • Stretch without creating any excessive muscular elongation or articular tension <ul style="list-style-type: none"> • Every day. • After the muscular strength and power or cardiovascular exercises
3 and 4		
5 and 6		
7 and 8	3 sets of 3 reps (remaining in the same position for 10 seconds)	
9 and 10		
11 and 12		

5

Recommended exercises for each functional level

What follows are the recommended exercises for improving muscular strength and power, cardiovascular resistance, balance and walking and flexibility at each one of the functional capacity levels.



MUSCULAR STRENGTH
AND POWER



CARDIOVASCULAR
RESISTANCE



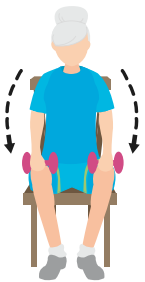
BALANCE AND WALKING



FLEXIBILITY



MUSCULAR STRENGTH AND POWER EXERCISES



1. EXERCISES IN A SITTING POSITION BENDING AND EXTENDING THE ARMS WITH LOADS

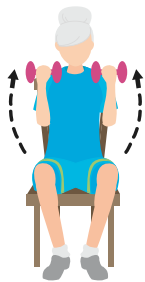
Procedure

Sit with your arms stretched across your body with a weight in each hand. Bend the elbows towards the chest, moving the weights towards the shoulders (as in the photo).

Start

Determine the weight: choose a weight that allows them to do the exercise properly about 30 times without stopping yet makes them feel as though they have made an effort by the end.

- Begin by doing 1 set of 10 reps (in other words, do the movements indicated 10 times).
- Rest no less than one minute and no more than 3 minutes.
- Do another set of 10 more reps.



2. EXERCISES IN A SITTING POSITION BENDING AND EXTENDING THE ARMS WITH WITH AN ELASTIC BAND

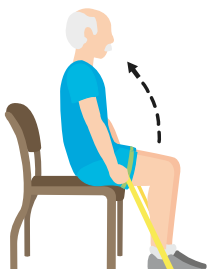
Procedure

Place the middle of the elastic band below the feet. Grab on to the two ends of the band with your hands at the height of your knees. Bend your arms towards your shoulders, keeping your wrists firm and keeping your elbows close to your trunk (like in the photo).

Start

Determine the band resistance: choose a band that allows them to do the exercise properly about 30 times without stopping yet makes them feel as though they have made an effort by the end.

- Begin by doing 1 set of 10 reps (in other words, do the movements indicated 10 times).
- Rest no less than one minute and no more than 3 minutes.
- Do another set of 10 more reps.





3. HAND PRESSURE EXERCISES

(Do exercise A and B)

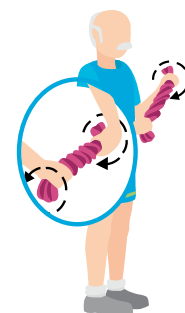
Exercise A: take a rubber or anti-stress ball in your hand and tighten it gradually as hard as you can. Relax your hand. Once the sets have been finished, rest and repeat with the other hand.

Exercise B: roll up a small towel into the shape of a tube. Grab the towel by the ends and use both hands to make a movement similar to wringing out a soaking towel. Tighten gradually but as strong as you can.

Start

Begin with exercise A. When you can do 20 pressure movements with the ball easily and non-stop, add exercise B.

- Begin by doing 1 set of 10 reps (in other words, do the movements indicated 10 times).
- Rest no less than one minute and no more than 3 minutes.
- Do another set of 10 more reps.



4. EXERCISES IN A SITTING POSITION, OPENING UP THE ARMS HORIZONTALLY WITH AN ELASTIC BAND

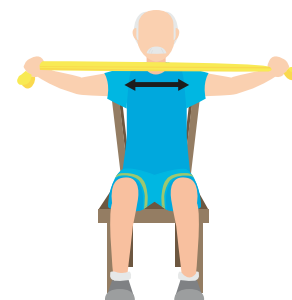
Procedure

Pick up an elastic band by the ends and roll it appropriately to prevent injury. Stretch the band at the height of your chest and separate the arms to fully extend the elbows (see the photo).

Start

Determine the band resistance: choose a band that allows them to do the exercise properly about 30 times without stopping yet makes them feel as though they have made an effort by the end.

- Begin by doing 1 set of 10 reps (in other words, do the movements indicated 10 times).
- Rest no less than one minute and no more than 3 minutes.
- Do another set of 10 more reps.



5. EXERCISE IN A SITTING POSITION, OPENING THE ARMS DIAGONALLY WITH AN ELASTIC BAND

Procedure

Pick up an elastic band by the ends and roll it appropriately to prevent injury. Begin to separate the arms diagonally to extend the elbows at the height of the knees (see the photo).

Start

Determine the band resistance: choose a band that allows them to do the exercise properly about 30 times without stopping yet makes them feel as though they have made an effort by the end.



- Begin by doing 1 set of 10 reps (in other words, do the movements indicated 10 times).
 - Rest no less than one minute and no more than 3 minutes.
 - Do another set of 10 more reps.
-

6. EXERCISE IN A SITTING POSITION WITH FEET AND CALF MUSCLES

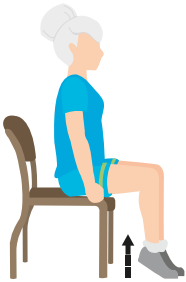
Procedure

Get on your tip toes until you are as high as possible and remain in that position for 3 seconds. Go down gradually until your heels are on the floor.

If the exercise is too easy, put on a ballasted ankle brace (they come filled with sand or another heavy substance) or secure a weight to your ankle with a belt (carefully so you don't fall).

Start

Determine the weight: choose a weight that allows them to do the exercise properly about 30 times without stopping yet makes them feel as though they have made an effort by the end. If it is very difficult to do with additional weight, do it without any load.



- Begin by doing 1 set of 10 reps (in other words, do the movements indicated 10 times).
 - Rest no less than one minute and no more than 3 minutes.
 - Continue doing another set of 10 more reps.
-

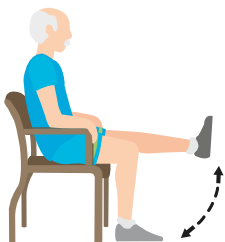
7. EXERCISES IN A SITTING POSITION EXTENDING THE KNEES WITHOUT A LOAD

Procedure

Horizontally extend one leg trying to keep it as straight as possible (as in the photo). Repeat with the other leg once you've finished the recommended sets.

Start

- Begin by doing 1 set of 10 reps (in other words, do the movements indicated 10 times).
 - Rest no less than one minute and no more than 3 minutes.
 - Do another set of 10 more reps.
-



8. EXERCISE IN A SITTING POSITION EXTENDING THE KNEE WITH A LOAD

Put on a ballasted ankle brace (they come filled with sand or another heavy substance) or secure a weight to your ankle with a belt (carefully so you don't fall).

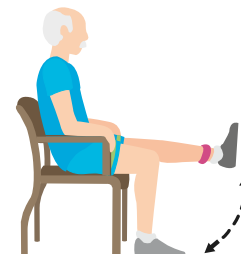


Horizontally extend one leg trying to keep it as straight as possible. Repeat with the other leg once you've finished the recommended sets.

Start

Determine the weight: choose a weight that allows them to do the exercise properly about 30 times without stopping yet makes them feel as though they have made an effort by the end.

- Begin by doing 1 set of 10 reps (in other words, do the movements indicated 10 times).
- Rest no less than one minute and no more than 3 minutes.
- Do another set of 10 more reps.



9. EXERCISE IN A SITTING POSITION OF THE HIP ABDUCTOR MUSCLES WITH AN ELASTIC BAND (THESE ARE THE MUSCLES WE USE TO SEPARATE OUR LEGS)

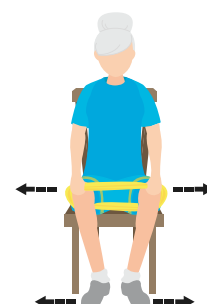
Procedure

Place the elastic band centered over your knees (as in the photo). Firmly hold onto the elastic band, tightening it against each one of the knees. Separate the knees gradually until you can't anymore.

Start

Determine the band resistance: choose a band that allows them to do the exercise properly about 30 times without stopping yet makes them feel as though they have made an effort by the end.

- Begin by doing 1 set of 10 reps (in other words, do the movements indicated 10 times).
- Rest no less than one minute and no more than 3 minutes.
- Do another set of 10 more reps.



10. EXERCISE STANDING UP, FOR THE CALF MUSCLES

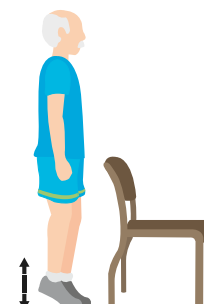
Procedure

Stand in front of a table or chair back with your feet separated and aligned with your shoulders (the separation between the feet must be approximately the distance between the shoulders).

Get on your tip toes until you are as high as possible and remain in that position for 3 seconds. If you lose your balance, support yourself on the table or chair; do not do so if you can keep your balance well. Go down gradually until your heels are on the floor.

Start

- Begin by doing a set of 10 reps (in other words, do the movements indicated 10 times).
- Rest no less than one minute and no more than 3 minutes.
- Continue doing another set of 10 reps.



11. HIP SEPARATION EXERCISE

Procedure

Stand up and, if necessary, support your arms on a firm chair or table. With your back straight, separate one leg from the other without bending at the knee (as in the photo). You must keep your legs straight and your feet forward (not towards the sides). Return to the initial position. Repeat these movements the number of times indicated.



Start

- Begin by doing a set of 10 reps (in other words, do the movements indicated 10 times).
- Rest no less than one minute and no more than 3 minutes.
- Continue doing another set of 10 reps.

12. HIP SEPARATION EXERCISE WITH A LOAD

Procedure

Put on a ballasted ankle brace (they come filled with sand or another heavy substance) or secure a weight to your ankle with a belt (carefully so you don't fall). Stand up and, if necessary, support your arms on a firm chair or table. With your back straight, separate one leg from the other without bending at the knee (as in the photo). You must keep your legs straight and your feet forward (not towards the sides). Return to the initial position. Repeat these movements the number of times indicated.



Start

Determine the weight: choose a weight that allows them to do the exercise properly about 30 times without stopping yet makes them feel as though they have made an effort by the end.

- Begin by doing a set of 10 reps (in other words, do the movements indicated 10 times).
- Rest no less than one minute and no more than 3 minutes. Continue doing another set of 10 reps.

13. EXERCISE FOR THE BACK OF THE THIGH

Procedure

Stand up and, if necessary, support your arms on a firm chair or table. With your back straight, flex the knee keeping your foot back. Return to the initial position. Repeat with the other leg once the sets indicated have been finished.



Start

- Begin by doing 1 set of 10 reps (in other words, do the movements indicated 10 times).
- Rest no less than one minute and no more than 3 minutes.
- Do another set of 10 more reps.





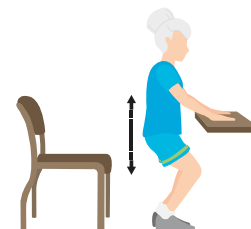
14. LEG BENDING EXERCISE WITHOUT A CHAIR

Procedure

Stand up behind a table. Start bending over, flexing the hips and knees as if you were going to sit down; then return to the initial position. If you think it's necessary, place a chair behind you for more security.

Start

- Begin by doing a set of 10 reps (in other words, do the movements indicated 10 times).
- Rest no less than one minute and no more than 3 minutes.
- Do another set of 10 more reps.



15. LEG FLEXING EXERCISE IN A CHAIR

Procedure

Sit in a firm chair with arms. Support your feet well on the ground and stand up without supporting the arms on the chair. If you can't do it, support yourself with just one arm and, if you can't do that, do it with the help of the two arms. Once you are up, remain standing for 1 second and then sit down again. Rest a few seconds and begin again.

Start

- Begin by doing 1 set of 10 reps (in other words, do the movements indicated 10 times).
- Rest no less than one minute and no more than 3 minutes.
- Do another set of 10 more reps.



16. EXERCISE GOING UP AND DOWN STAIRS

Procedure

Go up and down stairs the first few days. Start by using the handrail and then you can gradually go up without help or even take two stairs at a time.

Start

- Go up and down stairs, progressing from 5 steps to 20 steps. Do 1 to 3 sets





CARDIOVASCULAR RESISTANCE EXERCISES

1. GET-UP AND WALK SLOW EXERCISE

Procedure

The cardiovascular exercise program shall only begin once the elderly person improves their muscular strength.

Stand up from the sitting position with the help of another person or a walker. Walk at your pace for the seconds indicated. Stop, rest and start walking again. Repeat as per the instructions prescribed (see the following section).



Start Program A

- Walk for 5 seconds. Stop and rest 10 seconds without sitting. Repeat this procedure 5 more times.
- Begin walking again and walk for 10 more minutes. Stop and rest 20 seconds without sitting. Repeat this procedure a minimum of 3 times and up to 5 times.

2. WALKING EXERCISE

Procedure

Walk forwards, not looking at the ground, with relaxed shoulders and your arms slightly swinging.

Start Program B

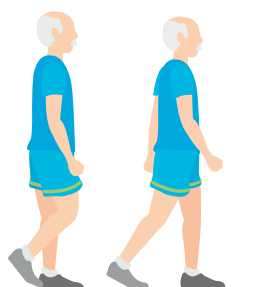
- Walk for 20 seconds. Stop and rest 10 seconds without sitting. Repeat this set 5 times.
- Begin walking again and walk for 25 more minutes. Stop and rest 20 seconds without sitting. Repeat this set 3 to 5 times.

Program C

- Walk for 4 minutes. Stop and rest 30 seconds without sitting.
- Begin walking again and walk for 4 more minutes. Stop and rest.
- Twice a day, 3 days a week.
- When they notice an improvement in their ability to walk (after week 8), they can walk only once a day (see the following section).

Program D

- Walk for 8 minutes. Stop and rest 30 seconds without sitting.
- Begin walking again and walk for 8 more minutes. Stop and rest.
- Twice a day, 3 days a week.
- When they notice an improvement in their ability to walk (after week 8), they can walk only once a day (see the following section).





BALANCE AND WALKING EXERCISES

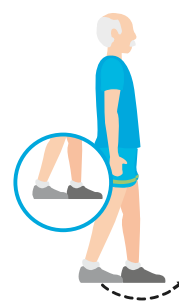
1. EXERCISE WALKING WITH YOUR FEET IN A LINE

Procedure

Stand up near a table, wall or family member. Put the heel of one foot in contact with the tip of the other foot. The idea is to take small steps in a straight line, placing the heel of the foot forward just before the tip of the other foot (see the photo). If you feel more secure, stand up and support yourself with a table or handrail.

Start

- Walk one set of 10 steps. Stop and rest 10 seconds without sitting.
- Rest no less than one minute and no more than 3 minutes.
- Repeat.



2. EXERCISE FOR BALANCE ON ONE LEG AND WITH ARMS CROSSED

Procedure

Stand up. Cross your arms above your chest (as in the photo). Flex one leg while the other continues to be stretched and keep it up for 5 seconds; lower that leg and do the same with the other leg.

Start

- Remain in the same position and count to 10 with each leg.
- Rest no less than one minute and no more than 3 minutes.
- Repeat with each leg.



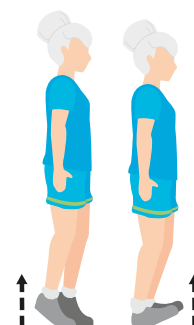
3. TIP - HEEL BALANCE EXERCISE

Procedure

Stand up. Maintain your balance by supporting your weight only on the tips of your toes. Remain in that position for a few seconds and then maintain your balance by supporting yourself only on your heels. If you feel more secure, stand up and support yourself with a table or handrail.

Start

- Remain in that tip toe position and count to 10; then, count again to 10 staying on your heels.
- Rest no less than one minute and no more than 3 minutes.
- Repeat the set.



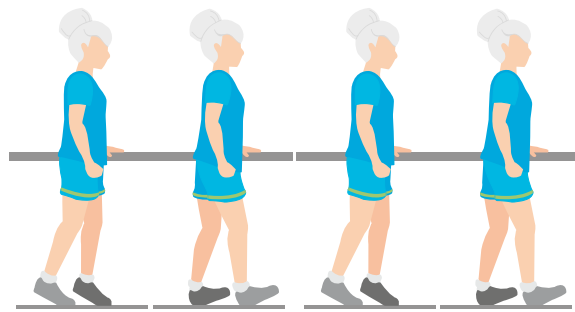
4. EXERCISE WALKING ON YOUR TIP TOES AND HEELS WITH HELP

Procedure

Stand up and support yourself on the side of a table or handrail. Walk by supporting your weight only on the tips of your toes. Take a break and begin walking again yet now supporting yourself on your heels.

Start

- Walk on your tip toes and count to 10. Stop and count to 10, now walking on your heels.
- Rest no less than one minute and no more than 3 minutes.
- Repeat the set.



5. EXERCISE WALKING AROUND SMALL OBSTACLES

Procedure

Set up small 10-15 cm obstacles such as shoes boxes, sneakers, etc. along a short path.

Stand up and support yourself on the side of a table or handrail. Walk in a relaxed way and step over the obstacles.

Doing this exercise with another person's help is recommended.

Start

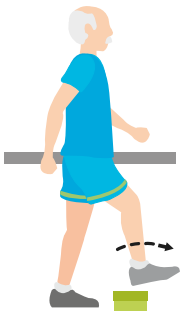
With and without support over small 10-15 cm obstacles.

- Walk in a relaxed way and step over the obstacles.
- Set up 5 obstacles to begin.
- When you finish the walk, begin again. Repeat 8 times.

Progression:

When you notice your capacity improve, increase the difficulty and add some of these instructions:

- Change the position of your arms; cross your arms or make a cross shape, for example.
- Do the exercises on different surfaces; on a rug, for example.
- Close your eyes, but only if someone is near to help you.





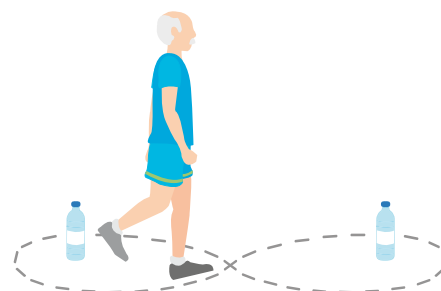
6. EXERCISE WALKING AND CHANGING DIRECTION ("DOING EIGHTS) BY GETTING AROUND SMALL OBSTACLES

Procedure

Walk and change direction; in eights, for example.

Start

- Walk and count to 10.
- Rest no less than one minute and no more than 3 minutes.
- Repeat the set.



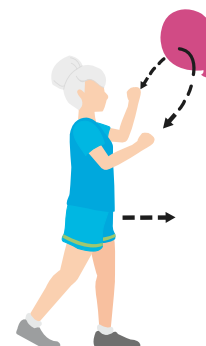
7. DO THE EXERCISES WITH MULTI-TASKING, FOR EXAMPLE, COMBINING EXERCISES BALANCE AND PASSING A BALL.

Procedure

Do the above exercises with complex multi-tasking (balance exercises and pass a ball, for example)

Start

- Walk and count to 10.
- Rest no less than one minute and no more than 3 minutes.
- Repeat the set.





FLEXIBILITY EXERCISES



1. ARM STRETCHING EXERCISE

Procedure

Stretch your arms upwards with your hands linked together as if you were to touch the ceiling. Remain in the same position for 10-12 seconds. Then take a break, relax your arms for 5 seconds and begin again. This exercise can be done sitting or standing.

Start

Standing or sitting.

- Begin by remaining in the same position for 10-12 seconds and repeat 2-3 times.
- Rest no less than one minute and no more than 3 minutes.
- Repeat.

2. EXERCISE TO STRETCH THE UPPER SHOULDER MUSCLES

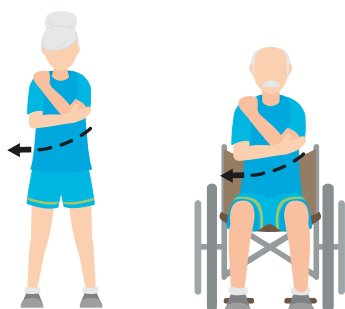
Procedure

Place your hand on the opposite shoulder and keep the elbow close to the chest. Using the hand from the other arm, push the elbow towards the opposite hand until you find a position where you feel some tension in the upper shoulder muscles. Remain in the same position for 10-12 seconds (see the photo). Take a break, relax your arms for 5 seconds and begin again.

Start

Standing or sitting.

- Begin by remaining in the same position for 10-12 seconds and repeat 2-3 times.
- Rest no less than one minute and no more than 3 minutes.
- Then do it with the other shoulder





3. EXERCISE TO STRETCH THE NECK MUSCLES

Procedure

This exercise can be done sitting or standing (if done sitting, place a pillow or cushion behind your back).

Turn your head to the right until you feel some tension in the neck muscles and remain in this position for 10-12 seconds. Pause for 5 seconds and begin again towards the left side.

Start

Standing or sitting.

- Begin by remaining in the same position for 10-12 seconds and repeat 2-3 times.
- Rest no less than one minute and no more than 3 minutes.
- Repeat.



4. EXERCISE TO STRETCH THE SIDE OF THE NECK MUSCLES

Procedure

This exercise can be done sitting or standing (if done sitting, place a pillow or cushion behind your back).

Tip your head to the right until you feel some tension in the neck muscles and remain in this position for 10 seconds (as in the photo). Pause for 5 seconds and begin again towards the left side.

Start

Standing or sitting.

- Begin by remaining in the same position for 10-12 seconds and repeat 2-3 times.
- Rest no less than one minute and no more than 3 minutes.
- Repeat.



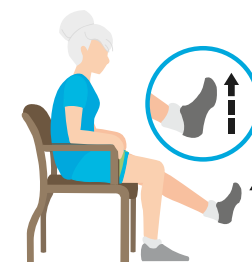
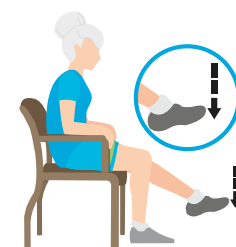
5. EXERCISES IN A SITTING POSITION FOR ANKLE FLEXIBILITY

Procedure

Flex your foot upwards moving your toes towards the body (as in the photo). Remain in the same position for 8-10 seconds. Take a break; then stretch your foot to get the opposite effect.

Start

- Begin by doing 1 set of 10 reps (in other words, do the movements indicated 10 times).
- Rest no less than one minute and no more than 3 minutes.
- Do another set of 10 more reps.



6. EXERCISE TO STRETCH THE ARM MUSCLES



Procedure

Sit in a chair away from the back and with your arms hanging on both sides of your body. Then move your arms back trying to grab on to the back of the chair (as in the photo). From that position, move your chest forward until there is a bit of tension in the arm muscles. Remain in this position for 10 seconds. Then relax the stretch for 5 seconds without removing your hands from the chair back. Repeat.

Start

- Begin by remaining in the same position for 10-12 seconds and repeat 2-3 times.
 - Rest no less than one minute and no more than 3 minutes.
 - Repeat.
-

7. EXERCISE TO STRETCH THE THIGH MUSCLES



Procedure

Stand up behind a firm chair or a table. Bend one leg while continuing to stretch the other (as in the photo); with your hand to help, try to force bending until you feel a bit of tension in the muscles in the forethigh. Remain in the same position for 10 seconds. Pause for 5 seconds and begin again with the other leg.

Start

- Begin by remaining in the same position for 10-12 seconds and repeat 2-3 times.
 - Rest no less than one minute and no more than 3 minutes.
 - Then do the same with the other leg
-

8. EXERCISE TO STRETCH THE BACK OF THE THIGH

Procedure

- Start in a sitting position and stretch one of your legs by supporting your heel on the ground.
- Pull the foot supported on the ground slightly up
- Place your two hands on the knee opposite the stretched leg.
- Move your trunk forward until you feel a bit of tension in the muscles in the rear of your back and the rear of your thigh.

Start

- Begin by remaining in the same position for 10-12 seconds and repeat 2-3 times.
- Rest no less than one minute and no more than 3 minutes.
- Then do the same with the other leg.



6

Monitoring for signs and symptoms of intolerance to physical exercise while doing it

What follows are some signs and symptoms of intolerance to physical exercise that should be monitored when doing physical exercise. If you notice any of them, **you should stop immediately and check with your doctor.**

- Breathlessness
- Pain/tightness in your chest
- Palpitations
- Dizziness or loss of consciousness
- Difficulty holding a conversation comfortably while doing physical exercise
- Intense fatigue
- Blue lips or bluishness under your nails
- Nausea
- Pale, damp or cold skin



7

A few tips and recommendations

Before doing the exercises you have been instructed to do, remember the following tips. Carrying them out is essential to truly getting the benefits from the physical activity. Compliance will improve adherence to the program and minimize the risk of injury.

TIPS FOR UNDERTAKING THE PHYSICAL EXERCISE PROGRAM PROPERLY



- **No-pain rule:** if you feel articular or muscular pain, difficulty breathing, dizziness, a rapid heartbeat, etc. during an exercise, stop immediately.
- **Use an adequate area:** eliminate any obstacles that may increase a risk of falling. When doing standing up or balance exercises, you can use objects that will make it safer (chairs, bars, tables, etc.).
- **Make sure your shoes fit you well:** they should have flat soles, be anti-slip and offer good support for your heel.
- Wear comfortable clothing.
- Do not hold your breathing during the exercises. **Breathe normally.**
- **Talk to your doctor if you are not sure if you should do a particular exercise,** especially if you have had hip or back surgery.

TIPS FOR UNDERTAKING THE MUSCULAR STRENGTH AND POWER EXERCISES



Breathing technique

Breathe regularly, following this recommendation: Breathe in before making any effort and breathe out during the effort; then breathe in again upon finishing.

2 min

Rest

Rest for about 2 minutes between each exercise.



Use of weights

Do not use weights until the risks that may be involved have been assessed (injuries, cardiovascular events, the impossibility of doing the exercises, for example).



Illness

If you must stop the exercise program because of an illness, contact your doctor before starting again after recovery. Try to continue where you left off, progressively.

TIPS FOR WALKING



- Wear comfortable clothing and footwear.
- **Walk looking ahead**, not down.
- Your shoulders should be **relaxed** and your arms should swing slightly.
- With each step, **first put down your heel** and then your big toes.
- Finish off with a cool-down by walking slowly for 2 minutes.
- **Enjoy the activity.**

TIPS FOR DOING THE EXERCISES TO IMPROVE ARTICULAR MOBILITY AND FLEXIBILITY:



- Always do the exercises after the muscular strength or cardiovascular resistance session.
- When doing flexibility exercises, holding the position you are doing for 10 seconds and then stopping and relaxing the stretch for 5 seconds is recommended.
- Do each exercise 2 to 3 times, (2-3 times 2x10")
- Never create any excessive muscular elongation or articular tension; in other words, do not stretch violently or abruptly.
- Stretch until you feel a bit of tension and then remain in that position for the recommended 10 seconds.



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