





# MALNUTRITION, FRAILTY AND SARCOPENIA CAN BE POTENTIALLY PREVENTED AND MANAGED WITH:1

diet counselling, protein intake adjustment, oral nutritional supplementation and management of physical exercise and polymedication

### **BENEFITS OF NUTRITIONAL SUPPLEMENTS**



### NUTRITIONAL benefits:2

Improve dietary intake, body weight and help reach nutritional goals.



### FUNCTIONAL benefits:3

• Improve quality of life, mobility and independence in daily activities.



### CLINICAL benefits:3

- Reduce the appearance of health complications.
- Reduce sensitivity to infections and strengthen the immune response.
- Accelerate wound healing.
- O Decrease mortality.

### ECONOMIC benefits:3



- Reduce the readmissions of hospitalisation.
- O Decrease the length of hospital stays.
- Decrease the frequency of visits to the doctor and/or home visits by up to 30%.
- Reduce the cost of treatment.

### **BENEFITS OF PHYSICAL EXERCISE**



Reduces the rate of falls and improves gait speed, balance and strength performance, which all help maintain the functional capacity during aging.<sup>4</sup>



Combination of oral nutritional supplementation with physical exercise induces an increase in muscle mass and function, and a decrease in adipose muscle infiltration that ultimately leads to a mobility improvement in people suffering from frailty and sarcopenia.<sup>5-7</sup>







# ORAL NUTRITIONAL SUPPLEMENTS PLAN FOR OPTIMAL COMPLIANCE

### **TYPE OF SUPPLEMENT:**

→ High protein oral nutritional supplements in order to improve nutritional status, physical function and quality of life.8

### START AND FREQUENCY:

- Start the nutritional treatment as soon as possible. Adapt the dose to the patient nutritional needs (1-3 servings per day; ideally 2 servings per day). Recommend intake at times which do not interfere with main meals.
- Consider prescribing a high protein supplement (of at least 20 g protein) after the exercise/therapy session.<sup>5</sup>

### TIPS ON HOW TO CORRECTLY USE ORAL NUTRITIONAL SUPPLEMENTS:

SUGGESTIONS ON HOW TO TAKE THE ORAL NUTRITIONAL SUPPLEMENT PRESCRIBED FOR YOU BY YOUR HEALTHCARE PROVIDER, AND HOW TO STORE THE PRODUCT.



# HOW TO TAKE THE ORAL NUTRITIONAL SUPPLEMENT YOU HAVE BEEN PRESCRIBED?

This oral nutritional supplement should be **complemented with your diet** and not substituted. It will help to increase the **total nutritional content** of your meals and improve your **overall nutritional status**.

It is important that you take the supplement as soon as you have completed your exercises recommended by your health provider, and not wait 2 or 3 hours. In this way, you will improve your muscle mass and strength and therefore achieve a faster recovery.



### **HOW LONG SHOULD YOU TAKE IT?**

Your doctor, nurse or dietician will decide the **length of the treatment**. As with medicines, you should only stop taking your oral nutritional supplement when indicated by your health provider. Remember that it is fundamental to **respect the doses or indicated quantities** suggested by your healthcare provider.



# HOW SHOULD THE PRODUCT BE STORED?

Store in a **cool and dry place** that is protected from the sun. Once opened, do not forget to store in the refrigerator but for a maximum of **24 hours**.













# PHYSICAL EXERCISE PLAN ACCORDING TO PATIENTS' FUNCTIONAL CAPACITY

### **TYPE OF TRAINING:**

Circuit training at the highest possible intensity, mandatory for the leg muscle group and optional for the arms. Complete two exercises according to the functional capacity of the patient. These exercises simulate the patient's movements during their daily activities, as the elderly use close to their maximum strength in 2 specific activities for example: going up and down stairs and getting up from a chair.<sup>9,10</sup>

### START, PROGRESSION AND FREQUENCY:

- Start with 2 sets of 10 repetitions each. When the activity can be carried out easily, increase the load and/or the number of series or repetitions.
- Perform the exercises **3 to 4 times** a week for at least **10 weeks**.

### TIPS FOR MAXIMISING THE EXERCISE PLAN

WHILE DOING THE EXERCISES KEEP IN MIND THE FOLLOWING ADVICE, WHICH IS ESSENTIAL FOR THE REHABILITATION SESSION TO BE REALLY BENEFICIAL.



### **NO PAIN RULE**

If during an exercise you feel joint or muscle pain, difficulty in breathing, dizziness, tachycardia, etc., stop immediately.



### **USE A SUITABLE SPACE**

Remove obstacles that may increase the risk of falling. When performing standing or balancing exercises, you should use elements that provide greater safety (chairs, bars, stretchers, etc.).



### **BREATHE NORMALLY**

You should **not hold your breath** during the exercises.



IF YOU HAVE UNDERGONE HIP OR BACK SURGERY OR HAVE ANY CONTRAINDICATION TO THE EXERCISE

Consult a specialist to help decide on the **most suitable exercise**.











# PHYSICAL EXERCISE PLAN ACCORDING TO PATIENTS' FUNCTIONAL CAPACITY

### **TIPS WHEN WALKING**



Use light clothing and comfortable shoes.



Walk looking straight forward and not down.



Shoulders should be relaxed. It's convenient to lightly balance your arms.



In each step, place the heel first and then the toes.



Finish with an exercise targeted to relax your muscles – walking slowly for 2 minutes.



Enjoy the activity.

### **TIPS FOR STRENGTH EXERCISES**



Breathe rhythmically, following the next guide: inhale before starting the exercise, exhale during and inhale when finished.



Pause every 2 minutes between one exercise and the next.



Do not use weights without previously evaluating the risks that this could have (injuries, cardiovascular episodes, inability to perform the exercises).



If you need to interrupt the exercise program due to an illness: once you have recovered, contact first your healthcare provider before restarting the program.











Proposal of exercises for your patients

## SEVERE LIMITATION [Gait Speed Test (6 m):<0,5 m/s]







# KNEE EXTENSION EXERCISE FROM A SITTING POSITION (WITH OR WITHOUT ANKLE WEIGHT)

### PROCEDURE:

Extend one leg horizontally, trying to keep it as straight as possible.

Repeat 10 times. Repeat with the other leg and when finished rest and move on to exercise 2.

## FEET AND CALF MUSCLE EXERCISE FROM A SITTING POSITION WITH ANKLE WEIGHT

#### PROCEDURE:

Put on a weighted ankle brace or attach a weight using an ankle strap. Stand on tiptoes as high as possible and hold in that position for 3 seconds. Breathe in as you slowly lower heels to the floor.

Repeat 10 times. Rest and move on to exercise 1.

## **SLIGHT - MODERATE LIMITATION** [Gait Speed Test (6 m):>0,5-1 m/s]







# LEG STRETCHING EXERCISE WITH OR WITHOUT A CHAIR

#### PROCEDURE:

**Exercise A:** Stand up behind a table. Squat by bending the hips and knees, then return to the starting position. Place a chair behind you for more security.

**Exercise B:** Sit on a chair with armrests. Get up without using the armrests. If you can't do this, use one or both armrests for support.

Repeat 10 times. Rest and move on to exercise 2.

### FEET AND CALF MUSCLE EXERCISE

#### PROCEDURE:

Stand behind a sturdy chair feet apart and shoulder aligned. Stand on tiptoes as high as possible and hold in this position for 3 seconds. Breathe in as you slowly lower heels to the floor.

Repeat 10 times. Rest and move on to exercise 1.





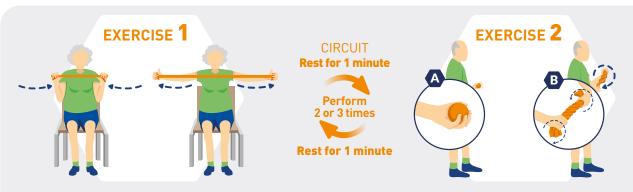








### Proposal of exercises for your patients



# HORIZONTAL ARM OPENING EXERCISE FROM A SITTING POSITION USING A RESISTANCE BAND

#### PROCEDURE:

Hold each end of the resistance band and roll it up to avoid injury. Stretch the band and spread the arms, at chest height, fully extending the elbow.

Repeat 10 times. Rest and move on to exercise 2.

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### HAND GRIP STRENGTH EXERCISES

#### PROCEDURE:

Start with exercise A: Take a rubber ball in your hand and squeeze it little by little as hard as you can; relax your hand. Repeat 10 times. Repeat with the other hand. Once you have finished, rest and move on to exercise 1.

**A+B progression:** When you can perform the exercise easily, incorporate exercise B.

**Exercise B:** Roll up a small towel. Grab the towel at both ends with both hands and perform a wringing movement. Squeeze it little by little but as hard as you can for 2-3 seconds.

Repeat 10 times. Rest and move on to exercise 1.

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