8. Instruments used to qualify care-giving at home

Suggestions for moving properly with assisted individuals

Regione Emilia-Romagna

Assessorato alla Promozione delle politiche sociali e di quelle educative per l'infanzia e l'adolescenza.
Politiche per l'immigrazione. Sviluppo del volontariato, dell'associazionismo e del terzo settore.

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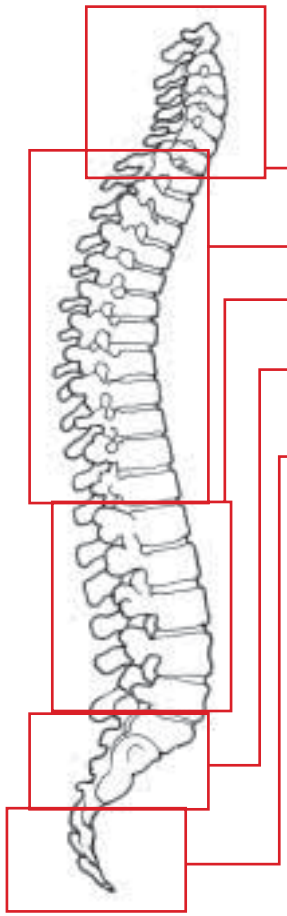
Summary

"Advanced age is a step towards our personal existence that, like all other steps, has its own physiognomy, its own atmosphere and temperature, of its joys and of its miseries."
(Hesse 1988)

1. Elements of anatomy and physiology of the spinal column (spine)

The **spinal column**, or spine, (also called **rachis**, vertebral column), is a resistant and flexible long **bone** formation, comprised of a series of small, overlying osseous (bone) rings called **vertebrae**, as well as by muscles and ligaments that sustain it.



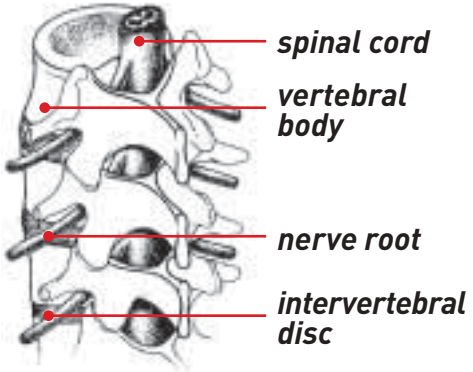
The spine is formed by five segments

Cervical	*formed by 7 vertebrae*
Thoracic	*formed by 12 vertebrae attached to the ribs*
Lumbar	*formed by 5 vertebrae*
Sacral	*formed by 5 vertebrae that are joined between themselves in adults*
Coccyx (tailbone)	*formed by the 4th and 6th vertebrae joined between themselves*

The spinal column contains and protects the **spinal cord**. The rachis is largely involved in movements of the body.

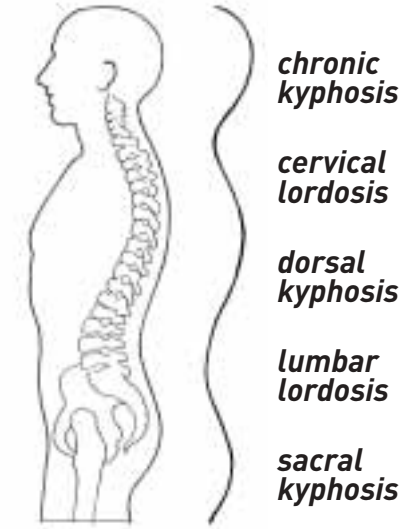
Figure 1. *Spinal column (spine) and groups of vertebrae*

The spinal column is mobile and resistant, due to the **intervertebral discs** that separate one vertebra from the other.



The intervertebral discs function as actual shock absorbers[1], allowing to support loads of hundreds of kilograms and reduce impact[2] sustained during everyday life.
The intervertebral discs are, furthermore, required to better distribute strength and facilitate movement.

Figure 2. *intervertebral discs*



The spinal column has four curvatures that help increase the elasticity of the spinal column.
These are:

- **Cervical lordosis**;
- **Dorsal kyphosis**;
- Lumbar lordosis;
- Sacral-coccyx kyphosis.

1 Device for absorbing impact, vibrations, and strain
2 Bumps, blows, shocks

2. Risks and hazards for assistants

When assisting an elderly or disabled person in moving from a wheelchair to a bed or from a bed to a wheelchair or to the bathroom, you can often perform excessive strain on the spinal column, caused by the incorrect use of your body in moving the assisted individual. These incorrect movements are risky and can create **pathologies**.

The risks related are:

- Lumbar (lower back) pain or back pain,
- **Herniated discs**
- **Tendonitis** (example: elbow or wrist pain)
- Cervical (neck) pain;
- Shoulder pain
- **Uterine prolapse.**

"Backaches" affect approximately 80% of adults and are the main problem in this sector. Causes of back pain are usually due to:

- Incorrect **posture** (body position);
- Body movements carried out in an incorrect manner;
- Reduced **muscle tone** (abdominal, lumbar, dorsal);
- Excessive muscle tension deriving from physical and psychological strain;
- **Excess weight**.

Figure 3. *Pain location*

Figure 4. *Herniated disc*

A herniated disc is a pathology that causes the back from stiffening, due to sharp pain and can prevent those who assist from moving for a long period of time.
This pathology is caused by repeated compressions[3] on the vertebral disc (Figure 4).

Lifting objects with your back bent forward and legs straight is very risky (See Fig. 5), since this position does not distribute the weight lifted also onto your legs, and an extreme pressure is put on the spinal column.

Pathologies regarding other body parts are mainly caused by excessive tension of arm and neck muscles when moving the assisted individual and by lack of muscle strength.

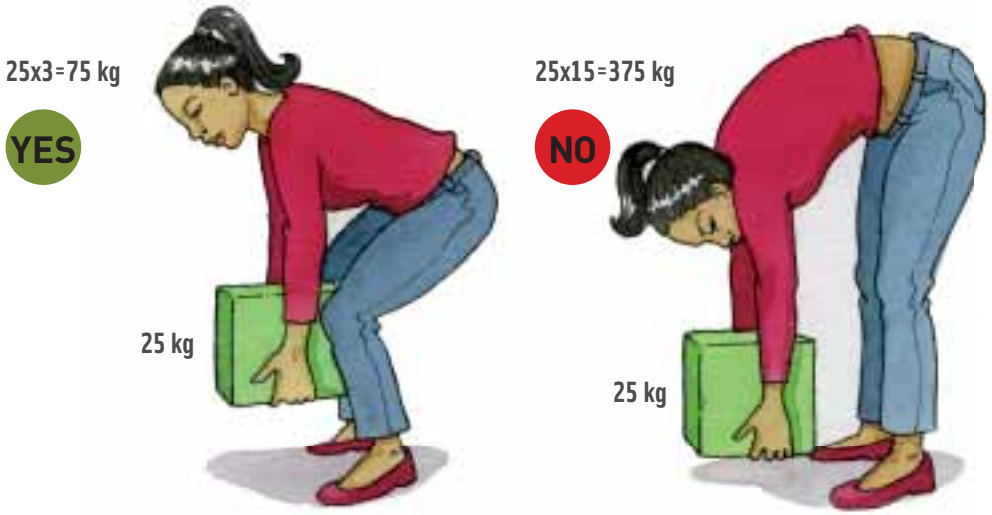


Figure 5. *Lifting heavy objects: correct and incorrect movement*

3 Pressure, strain

3. Simple exercise techniques to keep in shape

To keep your back in good health and alleviate shoulder and knee pain, you must relax, stretch, and strengthen several muscle groups.

The exercises recommended should be carried out for about 1 minute everyday for at least 10 minutes, morning and evening.

These exercises can be a method of preventing pain in the back and joints.

Stretching exercises

1. Lay down, relax your back, and breath deeply, with intervals of 6 seconds between each breath.

Figure 6. *Exercise n. 1*

2. Bring your knees to your chest, and hold this position for 30 seconds, then release, and return to position 1.

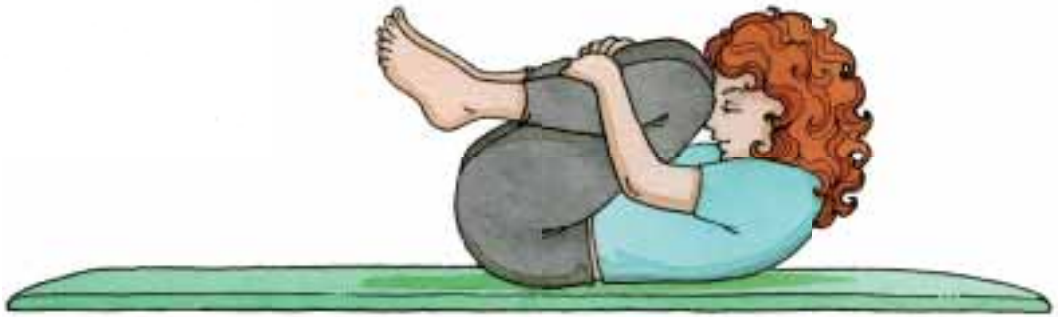


Figure 7. *Exercise n. 2*

3. Bring one knee to your chest, hold and keep this position for 30 seconds breathing regularly, then extend your leg to its original position; carry out with the other knee, then repeat - twice for each leg.

Figure 8. *Exercise n. 3*

4. Laying in position 1, contract your gluteus and your abdominal muscles, and try to push your back to the floor while breathing in – repeat 10 times.

Figure 9. *Exercise n. 4*

5. In a standing position or sitting on a chair, hold your elbow as in the illustration, and hold for 1 minute – repeat with the other arm.

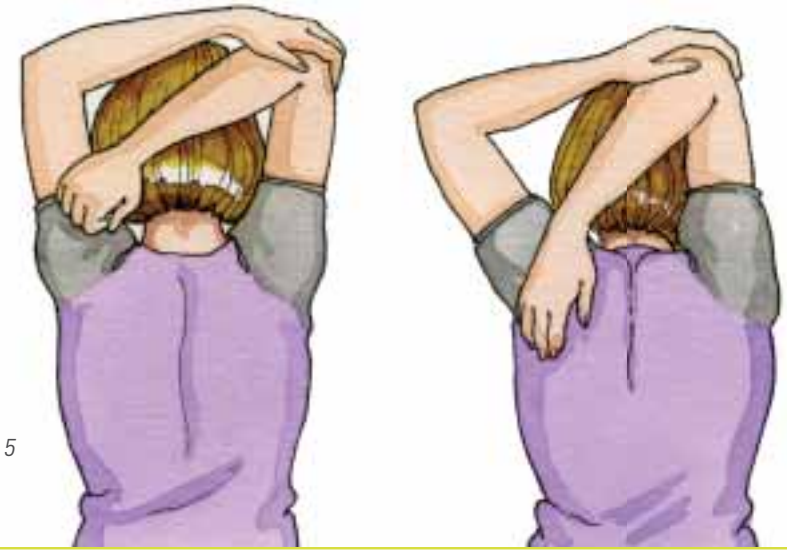


Figure 10.
Exercise n. 5

6. In a standing position, as in exercise 5, hold your elbow, then bend your torso to one side.
   Hold this position for 30 seconds – repeat with the other arm.

7. Put your hands on your lower back, and slowly bend back – repeat three times. Rest, then repeat **(do this whenever you lift a heavy object!!)**

Figure 11. *Exercise n. 6*

Figure 12. *Exercise n. 7*

8. Hold onto a doorframe, stretching your muscles, and hold this position for 30 seconds, relaxed and breathing regularly.

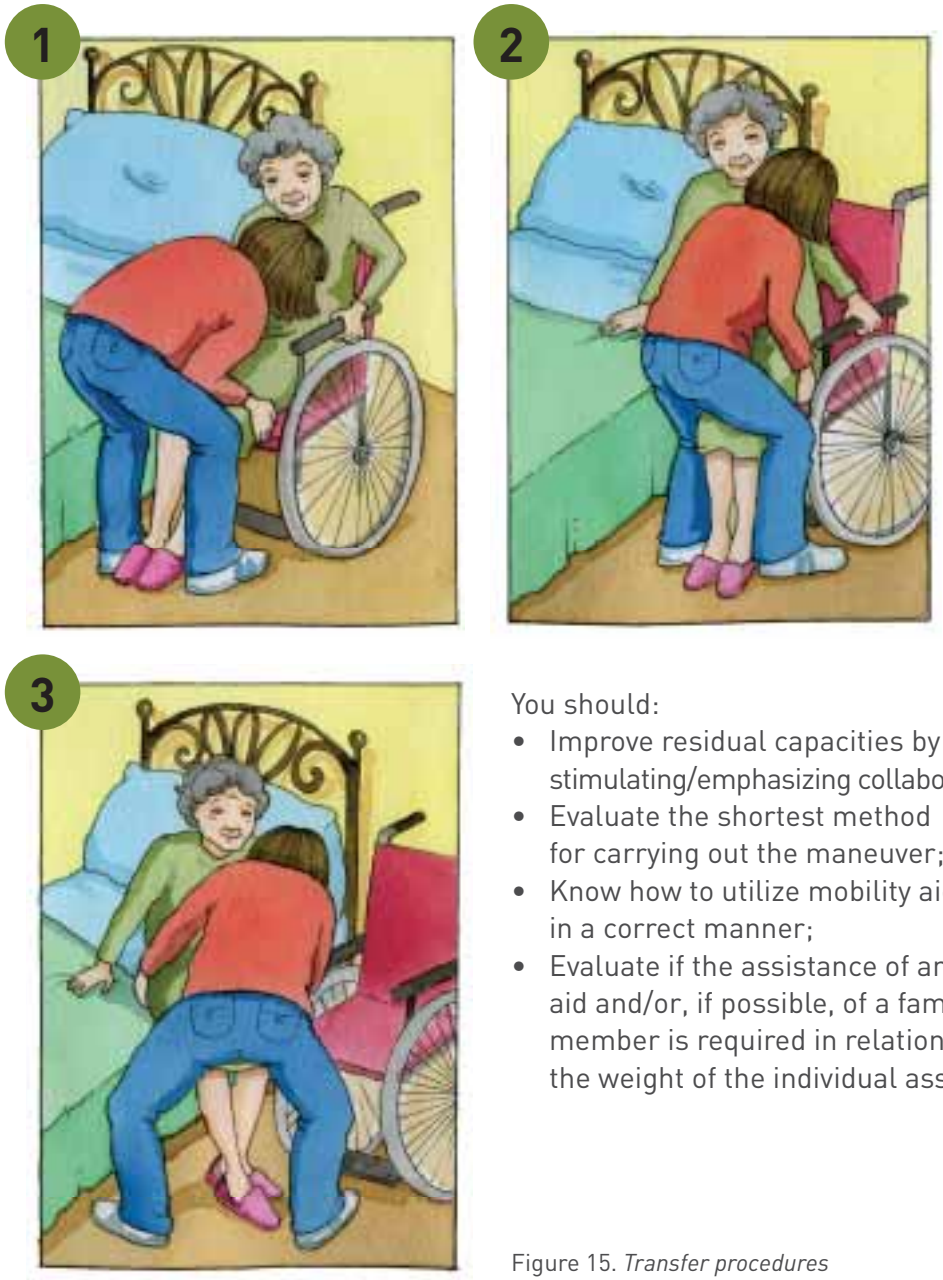
Figure 13. *Exercise n. 8*

4. Correct posture and correct handling maneuvers for assisting individuals in movements and examples of mobilization

The physical strain performed when assisting someone who is not autonomous in moving can cause, if associated with incorrect maneuvers and an incorrect posture, **accidents** with consequences that are also often serious for the caregiver. The prevention of accidents related to **mobilization** is prevalently based on the use of proper techniques, also including the correct use of any necessary mobility **aids** or being assisted by another person.
Whenever manual procedures are to be carried out (moving or lifting an assisted individual), do the following:

1. Remove any obstacles (rugs, floor lamps, night tables, etc);
2. Bring the wheelchair close and put on the brakes before proceeding with any maneuvers (ex. accompanying to the bathroom, or to bed);
3. To have a space around the bed;
4. Adjust the height of the bed (approx. 60 cm);
5. Make sure that the assisted individual is wearing closed comfortable shoes and that the room is well lit.

Figure 14. *Rooms and spaces*



You should:

- Improve residual capacities by stimulating/emphasizing collaboration;
- Evaluate the shortest method for carrying out the maneuver;
- Know how to utilize mobility aids in a correct manner;
- Evaluate if the assistance of an aid and/or, if possible, of a family member is required in relation to the weight of the individual assisted.

Figure 15. *Transfer procedures*

Practical suggestions for CORRECT MOVEMENT PROCEDURES

Before beginning any type of movement procedure with the individual requiring assistance, remember to:

1) find balance with your body: HOW?

- Lower yourself by bending your knees, and widen the base of the support[4];
- Widen feet;
- If present, lower the rail of the bed on the maneuver side;
- If required, rest one knee on the bed or both legs against the side of the bed;
- If possible, to better distribute physical strain, rest one knee on the bed, or both legs against the side of the bed, then rest one hand on the surface or on the headboard of the bed.

Figure 16. *Correct technique and incorrect position*

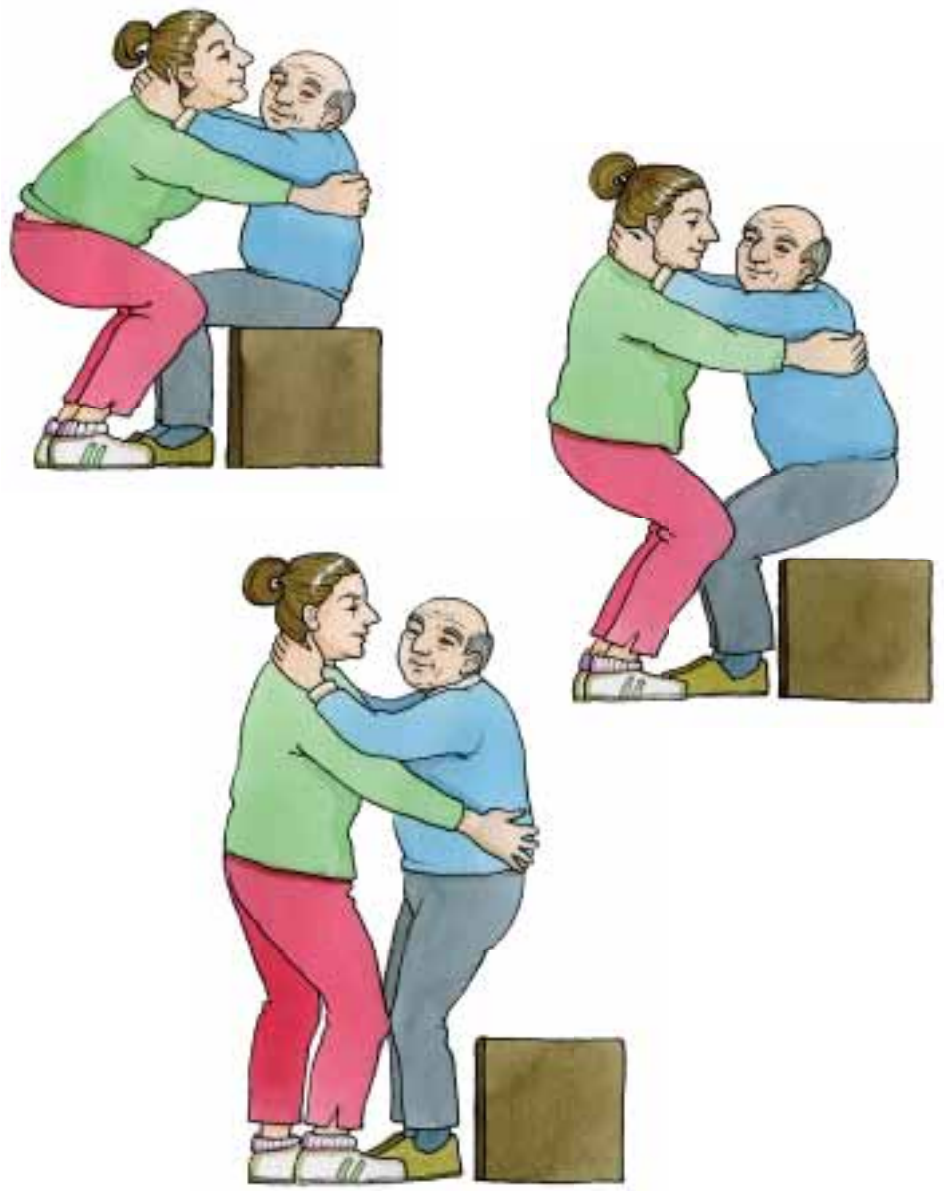


Figure 17. *Correct technique for assisting when standing up*

4 Surface on which body weight is distributed

Figure 18. *Correct and incorrect technique*

Important:
1) Stabilize[5] your back, keeping it slightly flexed forward and well supported;
2) Correctly hold the individual you are assisting, and keep him/her next to your body;
3) Movements must be safe and rapid to reduce any risks for both the assisted individual and the caregiver.
If the individual being assisted is not self-sufficient, but can however collaborate in movements, it is very important to have him/her actively participate, not only to reduce physical strain, but to also increase self-satisfaction and **self-esteem**, as well as reduce fear.
Never forget that risks can be reduced, but not completely eliminated.

5 Keep stable, still, firm

4.1 Examples of mobilization

Bed ridden individual

a) **Moving towards the headboard:** To help the individual move towards the headboard of the bed, if possible, have him/her use the trapeze or ask for collaboration by having the individual hold the headboard, then he/she must assist the caregiver by bending his/her knees.
If the person is not collaborative[6], hold the individual under the arms and under the pelvis at the same time, (**non-friction sheets** seem to be particularly useful in this situation. These sheets are supplied free by National Health Services).

6 Cannot collaborate/help

Figure 19. *Incorrect, dangerous procedure*

b) **How to turn on one side:** turn the individual towards yourself, while putting your hand on a shoulder and the other on the gluteus.
If the individual risks a dislocation, for example, after surgery of the femur (hip), position a pillow between his/her legs.

IMPORTANT: NEVER drag[7] by arms and legs!

Figure 20. *How to help move onto one side*

7 Pulling by an arm or leg to move the person

Figure 21. *Assisting to a seated position*

c) **Changing from a supine/laying position to a seated position:** to assist an elderly individual into a seated position, hold both a shoulder and the pelvis at the same time, moving the individual first to a side position then to a seated position. (see also booklet n. 4)
IMPORTANT: Always support the back[8] of the individual with a hand to prevent the risk of falling.

d) **Bed-wheelchair and wheelchair-bed transfer:** when assisting an individual transfer from a bed to a wheelchair, make sure you have a safe hold by keeping the individual close to your body. The movement must be rapid and safe, in order to keep your balance and prevent from falling. Stand in front of the person and help by holding onto his/her pelvis, so as to guide in the movement.

Position the feet of the individual with his/her **heels** towards the wheelchair, to prevent **ankle** sprains.
Rotate his/her body towards the chair and have him/her sit, controlling the downward movement. Ask to use his/her hands to lean on the armrests, keeping the bust bent forward, so as not to loose balance backwards and pull down the caregiver while moving into a seated position.
IMPORTANT: Verify the bed height before carrying out any type of maneuver. If the bed is too high, the person being assisted risks sliding off! (The height of the bed should be slightly higher than the wheelchair and the feet of the individual should touch the floor.)

8 The rear part of the bust

Before bringing to a seated position, make sure that the wheelchair is blocked into position, with the brakes properly set (see figure n. 33). When performing any type of maneuver, if necessary, remove an armrest.
IMPORTANT: During all movements, NEVER drag by the arms!!

Figure 22. *Transferring from bed to wheelchair*

5. Benefits of correct posture and maintaining residual autonomy

To improve the life of an assisted individual, always try to involve and stimulate him/her in performing daily living tasks, which can still performed. Certainly, it is quicker if an individual with motor difficulties is dressed, washed, or moved in a wheelchair rather than assisted while he/she tries to dress, wash, or walk alone. This due to resistance by the individual, since he/she is resigned to being "managed" by others or lacks motivation towards the day that awaits.
Only the prospective of a role in society, of decisional opportunities, of affirming one's own identity, or the fact of having objectives or projects, can trigger motivation towards maintaining residual autonomy.

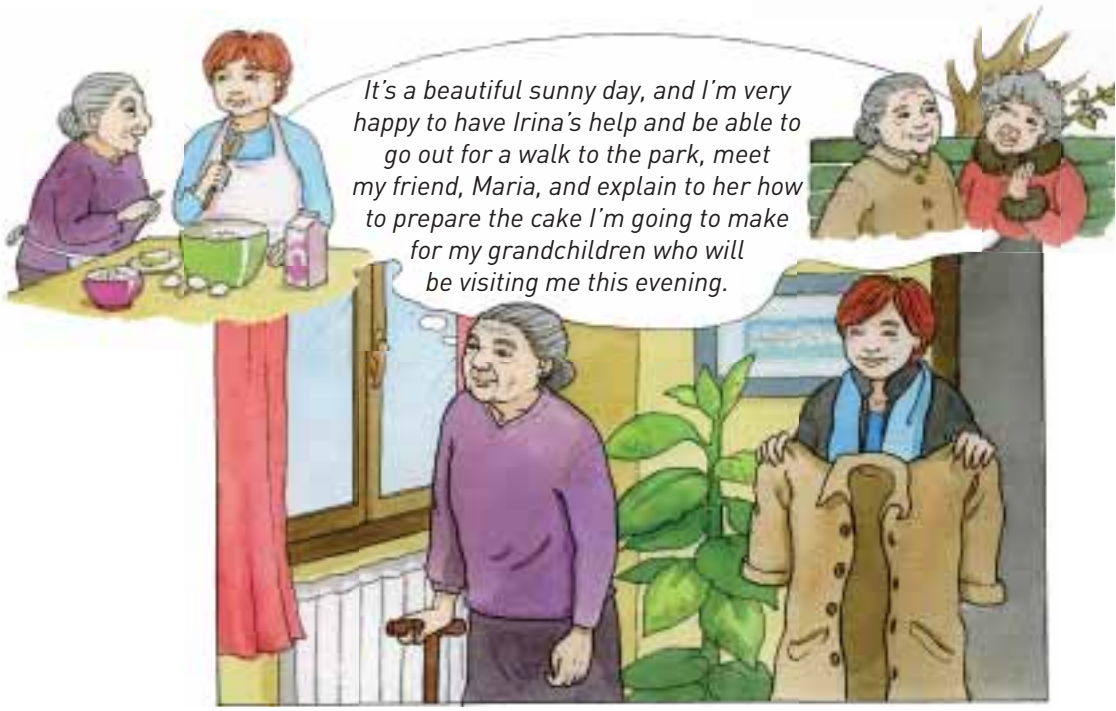


Figure 23. *Daily objectives*

A caregiving relationship is determined by the quality of life and well-being of an individual, and a caregiver can favor positive behavior and habits.
Remember that the objectives set for the assistant also include the following:

- Reduce and delay, as much as possible, dependence in daily activities and operate so that the **residual abilities** of the individual are maintained;
- Favor verbal and non-verbal communication, so that the elderly individual can express his/her needs by participating in personally related decisions.

Reduction in autonomy can concern one or more daily activities: eating, movement, communication, hygiene, evacuation[9] **(defecation and urination)**.

Communication

Communication is not only the capacity to speak, but also to express one's own needs or unease, as well as one's preferences. Communication is always present in daily activities.
The following is important for the caregiver:

- Be familiar with residual abilities: what the assisted individual knows how to do, likes to do, and can still do;
- Know and respect the daily habits of the assisted individual and his/her **social context**;
- Take care of the assisted individual with kindness, consideration, delicacy, and respect, when entering into the privacy or **intimacy** of the individual;
- Respect his/her **beliefs** and **traditions**.

Knowing these aspects of life of the elderly individual favors a positive relationship between the individual and the caregiver.

9 Physiological function of feces and urine expulsion

Benefits of correct posture for the assisted individual

Correct posture predisposes for participation and social relations and helps the **organism** to function properly (swallowing, breathing, etc.).
For example, it is important that when in a wheelchair, the assisted individual keep his/her bust erect, in order to look around and be able to relate with anyone nearby or even perform manual activities.

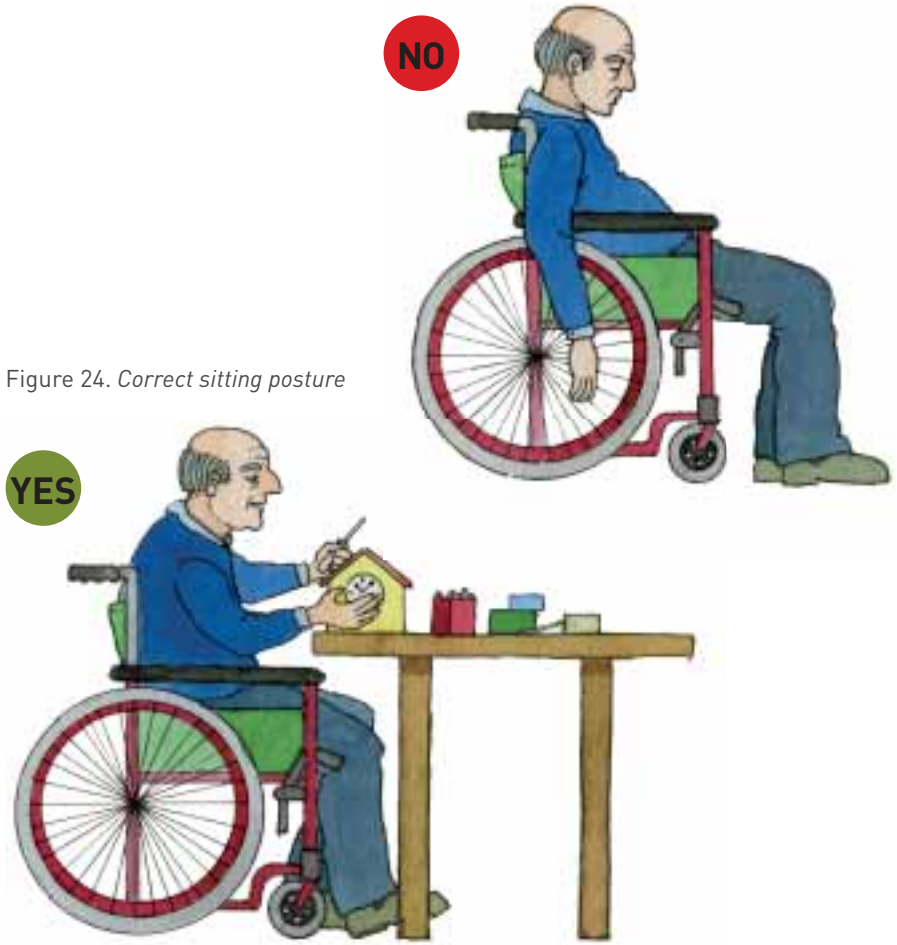


Figure 24. *Correct sitting posture*

It is important:

- To know that moments of physical contact are part of **non-verbal**[10] communication: during this time, the caregiver learns to perceive and understand the mood, frame of mind potentiality, motivation, and commitment that the assisted individual puts into performing activities;
- To stimulate physical activities, since this also means stimulating the psyche of the individual and maintaining interest in social relationships, while helping to regain control of his/her own body, especially after an acute illness or the presence of a chronic pathology.

Figure 25. *How to support and assist in walking*

Motor activities produce benefits on both a physical, as well as a psychological and social level, since this induces in becoming aware of one's own physicality, with all the potentialities and limits involved, in recognizing one's own persona identity, and in developing relationships of reciprocal acceptance, respect, and friendship.

Figure 26. *Motor activities*

10 Communication that does not utilize words, but body language, behaviour facial expressions, and movements.

6. Diverse necessities: types of aids and use in mobility

Mobility aids include a variety of products and technologies aimed in favoring the residual autonomy of the assisted individual, in facilitating movement, and in performing daily tasks: going to the bathroom, washing, dressing, or collaborating in the kitchen.
The evaluation used for selecting an aid must be made by competent operators: ex. physicians, physical therapists, or orthopedic technicians capable of evaluating the residual abilities of the assisted individual.
It is useful for a caregiver to take a training course with an operator who can illustrate and demonstrate the correct use of the mobility aids.

The most frequently used mobility aids are:

- Canes/Walking sticks, crutches;
- Tripods or tetrapods;
- Walkers and rollators;
- Wheelchairs (for sitting and traveling/moving);
- Lifts (for bed-wheelchair transfer and vice versa for those who cannot collaborate in moving or obese individuals);
- Articulated beds and its accessories (trapeze/anti-decubitus/pressure sore mattress/rails).

Canes/Walking sticks

This is the first support used when walking becomes unstable and is limited to short lengths. It is usually held on the opposite side of the limb (leg) that is mostly compromised. The use of this instrument presumes good coordination of movement and the absence of problems in maintaining balance, or **cognitive deterioration**. (For correct use of cranes/walking sticks, see Booklet n. 4). From a psychological viewpoint, the cane is among one of the easiest supports to accept, along with crutches.

Figure 27.
Canes/Walking sticks

Crutches

Similar in function and use as canes/walking sticks, but with a support for both the arm and forearm.

Figure 28. *Crutch*

Tripods or tetrapods

These types of mobility aid allow to have a wider supporting base. They are used for those who require more support, as compared to canes.

Figure 29. *Tripod (Tetrapod = 4 legs)*

Walkers 2 wheels and 2 legs

This type of walker does not require any effort to lift, and the legs act as brakes. Its use is obviously limited to the home environment.

Figure 30. *Walker 2 wheels, 2 legs / Foldable walker*

Walker 4 wheels

There are various types and models of walkers with 4 wheels: for indoor use or outdoor use, with seats incorporated, as well as with baskets/trays, clutched wheels, and manually controllable brakes.

Figure 31. *Il deambulatore 4 ruote*

Rollators

These are walkers with underarm supports and 4 wheels. For a description, see Booklet n. 4.

Figure 32.
Rollators with underarm support

Wheelchairs

When an individual gets tired walking, he/she is forced to give up a variety of social, work, and free-time activities, since no longer capable of walking for a longtime by foot and must often stop to rest.
In these cases, one must however try to utilize a mobility aid, which will allow to perform various activities that are otherwise not easy to perform.
For example, an outdoor foldable wheelchair can help cover longer trips than walking autonomously would allow.

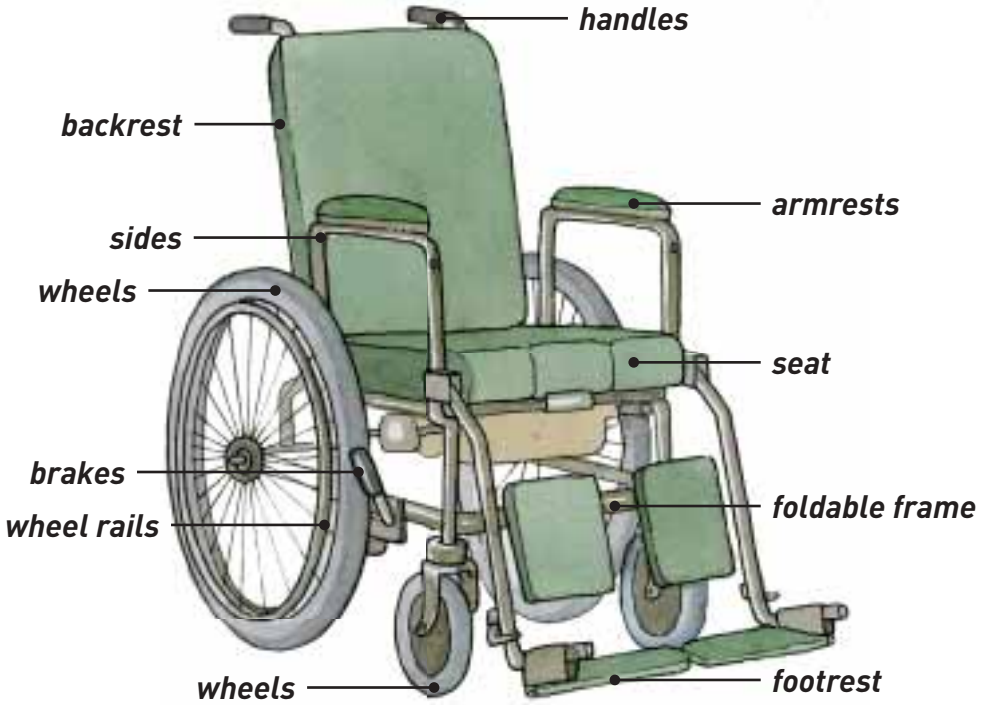


Figure 33. *Indoor wheelchair and its elements*

For example, a person can be perfectly capable of moving autonomously with or without aids in a domestic and/or working environment, but who then uses an outdoor foldable wheelchair to go to the supermarket to shop.

An elderly person is capable of ambulating[11], therefore, the use of a wheelchair should not replace walking with or without a mobility aid. A wheelchair allows an individual to prevent from being totally bed ridden[12].

Figure 34. *Carrozzina da esterni*

11 Walk
12 Remaining in bed, due to the impossibility to move, even with mobility aids

Correct posture in a wheelchair

The assisted individual must be helped to sit, first making sure that the wheelchair brakes are on. If necessary, remove an armrest (see figure n. 33 for brakes and armrests).
It is important to verify that the sitting position is correct: pelvis must be centered and tilted back, resting well against the backrest; thighs must rest completely against the chair sides; feet must be properly positioned on the footrest. Make sure the position is comfortable.
Those who remain seated in a wheelchair for a long period of time can have bothersome backaches.
Once in a seated position, the assisted individual, if not capable of moving autonomously, must be helped to change position at least every hour.
If necessary, position a pillow behind his/her pelvis.
Those who do not have total control of their upper limbs (arms) must be helped into a stable position, so that the arms do not slide along the body, since the hands of the individual could risk lesions if they become stuck in the wheels of the wheelchair. For the same reason, the legs of the assisted individual must also be correctly positioned.

Figure 35. *Correct sitting position*

Figure 36. *Incorrect wheelchair position*

Lift

These mobility aids are used for bed-to-wheelchair transfers and vice versa.

These can be equipped with various types of **slings**, according to the needs of the individual, capable of keeping a person suspended in a slightly reclined, comfortable, and safe position when being transferred from a bed to a wheelchair. The elderly rarely are fond of this aid, since they can feel uneasy in being lifted and suspended while waiting to be positioned in their wheelchair or armchair. Often those assisting also prefer manual transfer procedures. However, manual lifting maneuvers for a bed-ridden person are very difficult and also risky for the back.

Figure 37. *Lift*

Articulated bed

(with rails, anti-decubitus/pressure sore mattress, and trapeze)

The use of a trapeze or triangle allows the assisted individual to easily lift his/her back and/or pelvis.

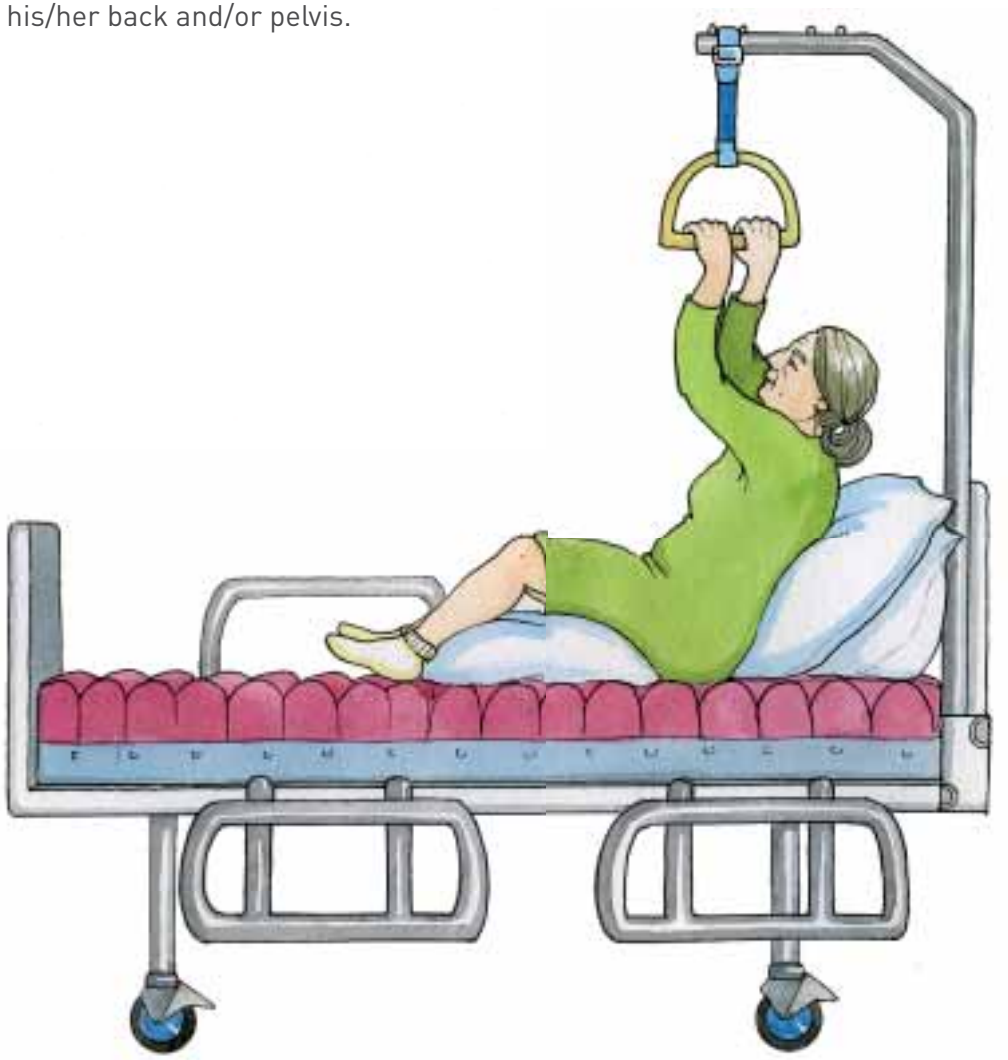


Figure 38. *Articulated bed with anti-decubitus/pressure sore mattress, rails, and trapeze*

7. Risk prevention techniques

The Prevention of accidents related to mobilization begins with the correct execution of maneuvers by the caregiver, in order to reduce risks for the assisted individual, and establish a relationship of reciprocal trust between those giving daily care and those receiving it.
Most frequent risks for the assisted individual are **falls, traumas to joints, ligaments, muscles** and **skin**.

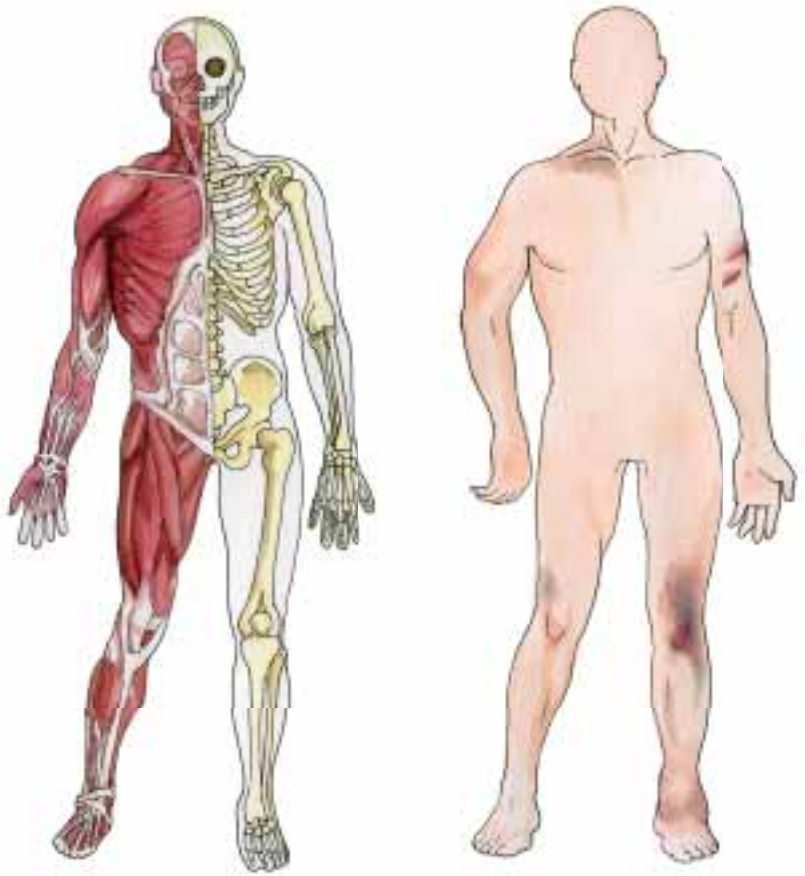


Figure 39. *Possible results of skin, muscle, ligament, and bone traumas*

In particular, the following can occur:

- **Bruises, hematomas, and swelling** due to skin traumas;
- **Pulled muscles,** due to an excessive and unexpected extension of muscles, which can cause sharp localized pain;
- **Sprains** caused by a twisting of joints, and characterized by pain and swelling;
- **Strains** due to the ripping of a part of a muscle, with consequent sharp pain and hematic effusion[13];
- **Dislocations** due to the movement of a bone extremity out of the normal position of the joint;
- **Fractures,** due to the partial or complete breakage of bones, with consequent pain and swelling;
- **Lacerations** of the skin, which are wounds that are more or less deep, with pain and bleeding.

All of the above stated risks (except for hematomas) can compromise the capacities of the assisted individual in a serious manner. Consequently, collaboration by the individual is considerably reduced. In more serious cases, as with fractures, healing can require a long period of immobilization, with consequent increase of the work load for the caregiver.
If the elderly individual is able to collaborate in assisted movements and transfers, physical strain is considerably reduced for the caregiver. For this reason **it is important to always inform the individual before performing any type of maneuver, in order to obtain attention and cooperation, as well as stimulate cognition and self-determination.**

13 Blood from an artery and/or vein

8. Requesting aids and adapting the domestic environment

If a mobility aid is necessary, a **physician's request** is required in which the authorized office that supplies the aids should also be indicated.

A fundamental reference for families and elderly individuals that are not self-sufficient and/or disabled is constituted by the **social services of the Commune.**
In particular, in the presence of an individual that is not self-sufficient and must be assisted at home, social services can elaborate a "personalized lifestyle and care program", which includes both personal aide interventions, as well as support for family members and private family caregivers who will assist the elderly individual. In the program, related to the conditions, needs, and decisions of the beneficiary[14], the territorial services can integrate interventions chosen among all those that can be activated on a local level (including: **tele-emergency assistance**, **home tutoring**, retirement relief, **care-giving allowances**, contributions for adapting the home environment, personal aid, psychological support, home-delivered meals, etc.), and guarantee communication with health services that are authorized in supplying mobility aids.
Should the necessity be recognized, the territorial Services can contact the CAAD ("Center for the Adaptation of Domestic Environments"), present in every Province, which offers consultation for the elderly and disabled who are limited in performing daily living activities, and regards the reorganization of internal spaces in the home, removing or overcoming obstacles and **architectural barriers**, studying solutions to facilitate everyday activities, accessing contributions and tax **reductions** for products and mobility aids available on the market.

14 Those who take advantage of the interventions. In this case, regarding the choices of the elderly individual and of the caregivers.

Glossary

A

- **Accidents:** usually occurring on the workplace, with consequent lesions for the worker that affect working capacities.
- **Ankle:** joint that joins the leg to the foot.
- **Anti-decubitus:** prevents the formation of "pressure sores", or skin lesions, due to continuous pressure on certain points of the body (see Booklet n.4 for illustration).
- **Architectural barriers:** obstacles or hindrances that impede, limit, or make it difficult for autonomous movement or the use of services, especially for those individuals with limited motor or sensorial capacities (for example, with a wheelchair), found outside and inside buildings, on sidewalks, or in any works constructed by man.
- **Autonomy:** capacity to perform daily activities alone or with aids.

B

- **Beliefs:** things in which we believe, for example, religion or convictions.
- **Bruises:** see chapter 7.

C

- **Care-giving allowances:** monetary contribution for elderly individuals that are not self-sufficient assisted in their own homes directly by family members, friends, or private caregivers (access to contributions is subordinated to the evaluation of each personal economic situation – income and assets – of the assisted individual, which cannot exceed a certain threshold).

D

- **Disability:** any type of limitation or loss (consequent to disablement) of the capacity to perform activities in the manner and possibility considered normal for a human being.
- **Dislocation:** see chapter 7.

E

- **Evacuation:** going to the bathroom, expelling feces.
- **Excess weight:** weight greater than that indicated as appropriate in relation to sex, height, and age.

F

- **Femur:** long lower limb of the thigh that also constitutes part of the hip and knee.
- **Fracture:** see chapter 7.

H

- **Handling maneuvers:** see page 14.
- **Heel:** rear part of the foot, opposite from the toes.
- **Hematoma:** see chapter 7.
- **Herniated disc:** breakage of an intervertebral disc. When the external ring looses consistency or breaks, part of the pulpous nucleus slips between one vertebra and another, leading to a hernia.
- **Home Tutoring:** preparation, by adequately trained operators of the territorial services network, by family caregivers, and by family members who care for individuals at home who are not self-sufficient, through supervision, personalized consultations, support, and mediation.

I

- **Intimacy (Privacy):** in the text this refers to "private parts", these being the parts of the body that, due to modesty, are always kept covered. Being intimate means being very close, united by very close relationships of friendship, affection, or parental ties.

J

- **Joints:** the il points of connection between bones (ex. shoulders, elbows, knees).

K

- **Kyphosis:** curvature of the spinal column, with rear convexity.

L

- **Lacerations of the skin:** see chapter 7.
- **Lesion:** damage, wound, fracture.
- **Ligaments:** cord-like thickness of fibrous connective tissue, which support or reinforce, for example, keeping together two or more bone segments.
- **Lordosis:** curvature of the dorsal spine, with front convexity.

M

- **Mobility aids:** any instrument, equipment, or technological system used by a disabled individual to prevent, compensate, relieve, or eliminate a disability or handicap. Aids are conceived for individual use during daily life, without a clinical objective.
- **Mobilization:** moving an elderly and/or disabled individual with the aid of a caregiver.
- **Muscle:** set of muscle fibers that comprise an autonomous organ in form and function.
- **Muscle tone:** a certain degree of muscle tension that maintains muscles elastic and capable of contracting.

N

- **Non-friction sheet:** mobility aid comprised of a sheet that slips without friction, facilitating movement of a person who is laying down or seated.

O

- **Organism:** human body intended as a set of apparatus and organs, which allow it to function (In the meaning used in the text).

P

- **Pathology:** any type of illness.
- **Posture:** see page 4.
- **Psyche:** psychological functions; mental, intellectual, and spiritual activities.

R

- **Rachis:** see Spinal column.
- **Residual abilities:** those which an elderly and/or disabled individual is capable of performing.

S

- **Self-determination:** will and capacity to make autonomous decisions.
- **Self-esteem:** consideration and esteem one has for oneself. A sentiment that results from self evaluation, which can go from absolute appreciation to absolute contempt.
- **Skin:** external covering of the body.
- **Slings:** support formed by a band of cloth that, wrapped around the hips and thighs of the individual, allows for ensuring and performing various maneuvers.
- **Social context:** family, friends, and social relations present in the daily life and environment of an individual.
- **Spinal column:** constituted by the vertebrae, which are articulated between themselves, forming an osseous axis that extends from the base of the cranium (skull) to the base of the torso; fundamental for supporting the body, as well as protecting the spinal cord.
- **Spinal cord:** nervous tissue from which nerve roots stem that arrive throughout the body.
- **Sprain:** see chapter 7.
- **Swelling:** see chapter 7.
- **Strain:** see chapter 7.
- **Stretching:** relaxed and prolonged lengthening exercises.

T

- **Tax reductions:** tax detraction or deduction that determines a reduction of taxes paid to the State and Region, therefore, an economic advantage.
- **Tendonitis:** inflammation of a tendon.
- **Tele-emergency assistance:** an assistance service (and/or emergency and check-up) performed through computer systems. This guarantees, through technology, the monitoring and activation of interventions for problematic situations, or ensures contact through phone calls programmed to control the situation of the individual.
- **Traditions:** usage customs, habits, traditions, the transmission of memories from one generation to another within the community.
- **Training:** preparation and practice with an instructor.
- **Trauma:** lesion determined by a violent cause.

U

- **Urination:** act of urinating, expelling urine ("peeing").
- **Uterine prolapse:** slipping out of the uterus from the cavity in which it is contained.

V

- **Vertebra:** each of the bone nodes (in humans these are thirty-three or thirty-four) that, positioned one on top of the other, form the spinal column. Human vertebra are almost all separated by discs of cartilage, which allow for movement of the entire column: These discs have a hole that forms a canal through which the spinal cord passes (see chapter 1).

W

- **Well-being:** state of good physical and moral health.

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