

EVERYTHING YOU NEED TO KNOW ABOUT PRESSURE ULCERS

- **What is a pressure ulcer (pressure ulcer, bedsore), and how is it caused?**

A key factor in maintaining the health and integrity of the skin and underlying soft tissues is the intake of necessary nutrients, which reach delicate areas through unimpeded blood circulation. When the skin is subjected to prolonged pressure in an area, blood circulation in that area is obstructed. When the skin's microcirculation is interrupted, necrosis of the skin area and underlying tissues occurs. This necrosis is called **a pressure ulcer or bedsore, or pressure injury**.

Pressure ulcers usually occur in areas of the body where the underlying bone protrudes very close to the skin, such as the heels, elbows, buttocks, tailbone, and back. If left untreated, they can worsen and eventually reach deeper layers of the skin or muscles, and bones.

- **Which patients develop pressure ulcers?**

Pressure ulcers are usually observed in the elderly; overweight or cachectic patients; the immunosuppressed; smokers; those immobilized in orthopedic casts; those with urinary or fecal incontinence; those with serious comorbidities such as diabetes mellitus; those undergoing prolonged bed rest; those with impaired level of consciousness; and those with impaired sensation.

Pressure ulcers usually develop gradually, but sometimes they can appear within a few hours. The mechanism and rate of development of a pressure ulcer have not yet been fully elucidated. A pressure ulcer, even if diagnosed early, is likely to worsen, despite therapeutic measures, before it begins to improve. It may recur, despite preventative measures.

- **What are the risk factors for developing pressure ulcers?**

The risk factors are divided into:

External factors:

- 1) Anything that irritates the skin, due to prolonged friction and pressure.
- 2) Maintaining the same position for a prolonged length of time.
- 3) Moisture on skin, e.g., in patients with incontinence.

Endogenous factors:

- 1) Age;
- 2) Smoking;
- 3) Underlying diseases – comorbidities;
- 4) Medication, such as analgesics, anti-inflammatories, steroids, cytotoxic drugs, beta-adrenergic blockers, which cause a decrease in skin integrity, mobility, appetite, etc., diuretics and laxatives that cause incontinence and diarrhea;
- 5) Previous pressure ulcer.

- **What are the symptoms of pressure ulcers?**

- An area of skin that has turned red (on white skin) or purple or blue (on black or brown skin) and which feels warm, spongy, or hard to the touch.
- Pus coming out of the lesion.
- High fever.

Not all skin lesions on the body are pressure ulcers.

- **What are the stages of pressure ulcers?**

At ANAPLASI, the internationally recognized SHEA scale is used to characterize the severity of a pressure ulcer. Based on this scale, pressure ulcers are categorized into four stages:

STAGE I: Skin redness.

STAGE II: Partial thickness skin loss involving the epidermis, dermis, or both. The ulcer is superficial and clinically appears as an abrasion or blister.

STAGE III: Full-thickness skin loss, which includes destruction or necrosis of underlying tissues, without a cavity.

STAGE IV: Extensive skin destruction, tissue necrosis, or muscle and bone destruction, cavity formation.

- **What will the physiatrists of ANAPLASI do about your pressure ulcers upon admission?**

In the event that upon your admission to ANAPLASI, you have bedsores, it is important that you answer clearly and honestly the questions that our physiatrists will ask you:

- When did pressure ulcers first appear?
- Have you had pressure ulcers in the past?
- How painful are pressure ulcers?
- How were they treated, and what was the result of the treatment?
- What medical conditions - comorbidities have you been diagnosed with, in addition to the condition for which you were admitted to ANAPLASI for rehabilitation, and what is your current treatment?
- What do you usually eat and drink?
- Do you smoke?

7. What measures are taken at ANAPLASI to prevent and treat pressure ulcers?

At ANAPLASI, the Rehabilitation Team uses photographic imaging, with the consent of the patients, to meticulously record the image of their skin from the moment of their admission. We are vigilant, both for the prevention and for the early, effective treatment of pressure ulcers, having adopted the international protocols recommended by the European Pressure Ulcers Advisory Panel (EPUAP) for the prevention and treatment of pressure ulcers.

Our nursing staff has the ability to assess and identify patients at risk of developing bedsores, to limit the effects of pressure and friction, and to avoid prolonged bed rest or sitting in a chair.

In particular, we take care to:

- Make the beds properly, so that the sheets are not wrinkled. The sheets should be changed as many times as necessary during the day, so that they are constantly dry.
- Use soap with a neutral pH.
- Keep patients' skin dry and clean, taking care to avoid contact with urine and feces.
- Moisturize the skin with cream/lotion.
- Protect the skin from wound secretions.

The nursing staff, in collaboration with the therapeutic staff of ANAPLASI (physiotherapists, occupational therapists):

- Monitor patients' skin on a daily basis.
- Change the patient's position as often as indicated, at least every 2 hours.
- Apply light massage around areas of redness every 2 hours, or as indicated.
- Continuously assess the blood supply to areas at risk.
- Monitor patients' skin on a daily basis.
- Use support surfaces that limit skin pressure.
- Place patients in an appropriate position using special pillows and supports, which are available at ANAPLASI.
- Correctly apply and position bandages and splints so that they do not fit too tightly.
- Use special protective covers on bony protrusions (heels, elbows, knees, coccyx, trochanter, shoulder blade, occipital region), which we have available at ANAPLASI.
- To increase the passive and active physical activity of patients, something that is undertaken by the specialized physical therapists and occupational therapists of ANAPLASI.

A critical role, both in the prevention and treatment of pressure ulcers, is played by the HILL-ROM robotic beds in ANAPLASI, which are equipped with special mattresses of unique microclimatic technology with thousands of built-in air cells that release air, depending on the pressure they receive from the body, adapting and following the needs of the sufferer. These mattresses have an alternating air system, with vibration – impact, rotation function, and OPTI-REST function for frequent position changes.

The nursing staff, in collaboration with the doctors of ANAPLASI, ensure that:

- Patients have adequate hydration, which is monitored through regular clinical and laboratory tests.
- Any swelling is limited, and measures are taken in cases of itching to avoid injuries.

The nursing staff, in collaboration with the doctors and the Department of Clinical Dietetics and Nutrition of ANAPLASI:

- Maintain a satisfactory level of nutrition for patients. This is checked by regular monitoring and measurement of body weight, and through laboratory tests of protein and albumin values.
- Continuously assess the nutritional status of patients, so that their diet is enriched with the appropriate nutrients.

The treatment and cure of pressure ulcers at ANAPLASI is carried out by the same members of the Rehabilitation Team, who work to prevent them.

The medical specialties involved in the treatment of pressure ulcers include not only the physiatrist, but also the dermatologist, the vascular surgeon, the orthopedic surgeon, the plastic surgeon, and the neurosurgeon.

Initially, pressure ulcers are treated conservatively.

The same Team that is responsible for pressure ulcer prevention:

- checks the patient's skin on a daily basis;
- takes care of the condition of the skin, avoiding pressure on it and changing the patient's position every 2 hours;
- ensures that the patient's skin is kept dry and clean.

Also, in collaboration with the doctors of ANAPLASIS, by administering the appropriate medication:

- Infections and inflammation are combated.
- Co-existing conditions that favor the formation of, or the worsening of existing pressure ulcers, due to limited mobilization or prolonged bed rest due to illness, are regulated. Dressings are placed (compresses, gauze, bandages, and/or a combination thereof) with special creams - ointments to absorb excess exudate and at the same time avoid drying of the ulcer, aiming at its faster healing.

In collaboration with the Department of Clinical Dietetics - Nutrition of ANAPLASI and with regular laboratory tests scheduled by ANAPLASI's doctors, good nutrition and hydration are maintained.

In cases where conservative treatment is not sufficient, surgical treatment is undertaken. Surgical cleaning of soft tissues is performed, with removal of necrotic eschars. The procedure is performed by the specialized physiatrists of ANAPLASI, who monitor the progress of the ulcers daily, and, with the appropriate instructions, contribute to their correct and timely treatment, recruiting other surgical specialties where necessary.

If extensive pressure ulcers appear difficult to heal, plastic surgery can shorten their recovery time.

Since pressure ulcers, in addition to feelings of pain and discomfort, sometimes cause depression and enhance the feelings of social isolation, the same Team collaborates with the Department of Clinical Psychology to treat signs of anxiety or depression in patients with pressure ulcers.

8. What advice do we give you to avoid developing a pressure ulcer again when you return home?

Upon returning home from ANAPLASI, you can reduce your chances of having another pressure ulcer by doing the following:

- Change position regularly.
- Use specially designed mattresses and pillows.
- Check your skin every day for early signs of pressure ulcers.
- Try to stay active and motivated
- Eat a healthy, balanced diet.
- Do not smoke.

Don't forget: If you need anything, the ANAPLASI Rehabilitation Team is always available to treat pressure ulcers even after you leave ANAPLASI.