LOW AIR LOSS THERAPY

Purpose

The purpose of low air loss therapy is to reduce the pressure applied to the surface of the skin by distributing the weight over a larger area and to facilitate improved blood flow. The continuous flow of air from the mattress surface also helps reduce skin moisture which helps to prevent shearing. By reducing pressures and increasing blood flow to the skin areas around bony parts of the body, low air loss therapy can promote comfort and reduce the factors that contribute to pressure ulcers (localized areas of damaged skin and underlying tissue). Low air loss therapy should only be used as part of a comprehensive wound/skin care program. Make sure you read and understand all manufacturers' use and care instructions.

Types

Low air loss mattresses have very similar features; the differences typically are the number of air cells, the height of the air cells, and whether they have the added alternating pressure feature. Low air loss mattresses replace the standard mattress on homecare adjustable beds.

All low air loss mattresses have a maximum weight limit that they can support. It is important to understand the limits and capacities for your low air loss mattress:

Weight of user (stated by user) is _____ pounds.
Maximum weight capacity of low air loss mattress is _____ pounds.

Use

The low air loss system consists of a mattress and an electronic control unit. The electronic control unit needs to be hung on the foot end of the bed. The standard homecare mattress is removed and the low air loss mattress lies directly on the springs or platform. Be careful to place the mattress in the correct position; there will be a head and foot section as well as a top and bottom. Attach the air hoses from the electronic control unit to the low air loss mattress.

Plug the electronic control unit into a grounded outlet and turn on the power. Turn the pressure setting to its maximum setting until the mattress is fully inflated. The time required to fully inflate the mattress will depend on the type and thickness of the mattress. Place the top surface of the mattress (therapy pad) over the inflated pressure pads (if applicable). Secure the fully assembled mattress to the bed frame as specified by the manufacturer. Your medical equipment provider will instruct you on whether a bed sheet should be placed on top of the low air loss mattress.

Place the patient on the center of the mattress and assess the level at which the patient sinks into the mattress. Adjust the mattress pressure until the patient sinks 2 - 3 inches into the mattress. After adjusting the mattress pressure, wait 3 - 5 minutes and reassess the level the patient sinks into the mattress. Slide the flat portion of your hand between the mattress and the bed to make sure there is a cushion of air between the patient's pelvis and the bed frame. Raise the head of the bed 30 degrees and recheck the air cushion under the pelvis. To prevent shearing, the head of the bed should never be raised above 30 degrees.

Most low air loss mattresses have a feature for quick deflation. This quick deflation feature is provided to facilitate the need to perform cardiopulmonary resuscitation (CPR). If your mattress has this feature, make sure you know how these deflation plugs are activated.

Safety

The safe use of a low air loss system requires it to be used as instructed, which includes the following safety precautions:

- Ensure that the CPR plugs are connected and that you know how to use them.
- Ensure that the electronic control unit power cord is routed underneath the bed frame.
- Ensure that the power cord, plug and air hoses are free of breaks, tears, or kinks.
- Ensure mattress is thick enough and wide enough so that the gap between the top of the mattress and the bottom of the side rails and the gap between the side of the mattress and the side rails is small enough to prevent patient from getting their head or neck between the mattress and the side rail.
- Failure to use bed side rails in the raised position could lead to accidental patient falls. Air mattresses have soft edges that may collapse when patients roll on to the edge.
- Never add, remove, or disable any feature, part, or function of your low air loss system.
- Never spray cleaners or liquids directly on the electronic control unit.
- Keep sharp or pointy objects away from mattress surface.
- Do not inflate the mattress when the bed is occupied.
- Do not use the mattress near an open flame or while smoking.
- Do not use the mattress if it is not securely fastened to the bed frame.
- Do not allow any unqualified person to use the low air loss mattress.
- Do not obstruct the areas where air intake occurs.
- Do not place hot objects on top of the low air loss mattress.
- Do not use an extension cord when connecting the electronic control unit.
- Do not under any circumstances, cut or remove the round grounding plug from the power cord plug and do not use any three (3) prong to two (2) prong electrical adapters.

In order to ensure care and provide operator safety, make sure you follow these safety guidelines:

- Use nightlights to increase vision around areas of use.
- Wipe up any water or slippery floor spills.
- Remove tripping hazards (loose floorboards, uneven floors, throw rugs, extension cords, clutter, etc.)
- Install grab bars, use bath mats with suction cups, and use an elevated toilet seat to prevent falls.

Maintenance

Your low air loss system must be kept clean by wiping it with a germicidal disinfectant solution; always unplug it before cleaning. If the low air loss mattress has a therapy pad, it may be machine washable. If your low air loss system has a filter located on the exterior of the unit, it should be cleaned weekly with a vacuum cleaner or washed in warm soapy water, rinsed thoroughly, and dried before replacing. Only qualified repair technicians should diagnose, perform maintenance, or repair any part of your low air loss system. Call your medical equipment provider if your low air loss system is not functioning properly.