

Halo Management for Patients and Caregivers

The halo vest is a treatment for a person who has a broken neck. It is put on so that your head and neck will not move, allowing the bones in your neck to heal. This usually takes place over a period of twelve weeks.

General Information

- You will be assessed regularly by your physician and team to determine when the halo will be removed.
- When helping a person in a halo vest, avoid hitting the metal framework as this transmits sounds through the pins in the skull. The noise is conducted through the bone to the ear and sounds extremely loud to the individual wearing the vest.
- DO NOT DRIVE. IT IS ILLEGAL. You are not insured in the province of Ontario to drive with a halo vest.

Parts of the Halo Vest

A halo ring or crown is fixed to the patient's head by four pins – one pin above each eyebrow and one behind each ear. The pins go approximately 1 mm into the skull. The halo ring/crown is attached to the vest by metal posts, maintaining the head and neck in a stable position.

The vest is made of a hard plastic shell and is lined with a synthetic fleece-like material. The entire apparatus weighs less than seven pounds. The vest should fit snugly. The halo will alter a patient's sense of balance and equilibrium until they become accustomed to it.

Care and Management

Pin Care

Clean the pins sites at least once a day with non-irritating soap (e.g. Dove) and water with the use of a cotton tipped swab e.g. a Q-tip or gauze square. Remember that a new swab or gauze should be used for each pin site. Normal saline solution may also be used. Please refrain from using any ointments (e.g. Polysporin) on the pin sites. It does not decrease the rates of pin site infections.

When cleaning around the pin sites, always check for the following:

- Redness or swelling of the skin around the pins
- Discharge at the pin site
- An open area where the skin has pulled away from the pin
- Pain or tenderness around the pin site

- Have someone check the pin sites at the back of the head for any of the problems listed above. Using a flashlight to fully visualize the back pin sites may help and it may be necessary to cut some of the hair that grows back in order to better visualize those pin sites. Should you hear a clicking noise, which only you will hear, this could be a sign of loose pins.

If any of the above occurs, be sure to contact a healthcare professional (SCI/Halo nurse) who is familiar with your halo to assess the situation, as the pins may need to be tightened.

Care of the Vest

Areas of pressure may develop under the vest in areas that come in contact with any vest edges. Extra liner or foam may be inserted to relieve these pressure areas. Try to keep the vest lining dry at all times. If the vest lining should get wet, you can dry it with a hair dryer on a cool setting.

Always remember that the metal frame of the apparatus should never be used to turn or lift the patient. All movement is transmitted to the pins and may cause them to loosen.

Skin Care/Bathing/Dressing

It is important to keep the patient's skin and fleece liner as clean as possible. Despite all precautions, skin breakdown may develop under the vest. The skin under the vest should be assessed daily during bathing for sores, blisters or redness. This is extremely important especially for those with impaired sensation. If sores, redness or blisters are present it will require medical attention.

How to shower the lower part of your body:

- You will need assistance to wash the bottom half of your body
- Use of a bath seat with a back rest and a hand held shower head is recommended
- Use a non-slip bath mat on the bottom of the tub to prevent slipping
- Be sure to keep the liner dry at all times

Skin care under vest:

Washing under the vest should be done daily and the patient needs to be lying down.

How to undo the vest:

- This will require the assistance of another person
- Turn onto side, lying flat on a bed
- Undo buckles and straps on the upper side of the vest
- Protect liner of vest with towel by inserting towel between patient and vest
- Wash skin with non-irritating soap and water and dry thoroughly
- Fasten buckles and repeat on opposite side
- The use of lotions or powders is not recommended under the vest

Hair Care

A mild shampoo such as baby shampoo is recommended. Soap around pin sites is not harmful; just ensure that all of the shampoo is rinsed off thoroughly.

- Ask someone to help you with shampooing and rinsing your hair
- Thread a towel through the bars of the brace and tuck it under the vest to keep the liner dry. Or, you can try using plastic wrap, a plastic bag, or an inexpensive plastic poncho
- Your caregiver can use an adjustable hand-held showerhead or a pitcher of water to wet your hair
- Towel-dry your hair slightly, and then finish off with a blow dryer held at a distance. Be careful, the rods on the brace may become hot!



Dressing

Alterations to clothing will be necessary. Only dress in a sitting position T- shirt can be put on by stepping into them following some alterations to the shoulder area.

- You will find it easiest to wear loose fitting clothing over your brace. For example, you can wear zipped or buttoned cardigans, sweatshirts, clothing with a neck drawstring, or v-neck t-shirts
- For women, you may find it easiest to wear a tube top, bikini top with neck drawstring, or strapless bra
- Wear slip-on shoes that are supportive with no heels and rubber soles to minimize the risk of falling, and use a long-handled shoehorn to assist with putting on your shoes if needed. You should not wear open back sandals or flip-flops.
- Use of a cotton undershirt under the lining of the vest can help to absorb moisture.

Activities of Daily Living

Sleeping

- You can sleep in any position that you find comfortable, including sleeping on your back, on your side, or on your stomach. Some patients find sleeping in a recliner chair the most comfortable for the first month, until they become more accustomed to the brace.
- You may sleep with or without a pillow under your head. You can place a small pillow, rolled up towel, or a wedge of foam between your head and the surface of the bed for more support.



Getting out of Bed

- You should not do a “sit-up” from a position lying on your back
- You should roll onto your side, swing your legs over the edge of the bed and use your arms as levers in assisting you to sit up



House Work

Due to the imbalance created with a halo, you will need to take extra precaution when bending forward or avoid it at all possible.

Cleaning

- You will not be able to vacuum or do any heavy house cleaning
- You can do some light dusting if items are at eye level
- You can sweep the floor if you use small, controlled movements

Cooking

- Bending is more difficult in a halo. Doing things at eye level is much easier. You will need to be cautious when bending forward while in a halo.
- You will need to be very cautious when using the oven, unless it is mounted at eye level
- You can use the microwave, toaster oven, and stove top for cooking
- Keep commonly used items and appliances on the counter top at eye level
- You can slide heavier items such as pots and roasts along the counter top on a tray to avoid lifting.
- A trolley on wheels can also be convenient for moving items around the kitchen
- For convenience, you may want to consider purchasing or preparing frozen meals that can easily be re-heated in the microwave

Washing the Dishes

- Be cautious when loading the bottom rack of the dishwasher. You can load the upper rack, or wash your dishes at the sink.

Laundry

- Do not carry heavy loads of laundry. You will not be able to use the washer and dryer since they require you to bend and twist at the waist, however, you can sort and fold laundry, or do ironing

Other Activities

Transportation

- You will not be able to drive while wearing your halo brace, because you cannot turn your head to check your shoulder for blind spots
- You can ride in a car as a passenger, but avoid twisting and rotating your body when entering or exiting the vehicle. You will need to turn your entire body as one unit. For example, you can back into the seat, buttocks first, and slide back until your head has cleared the entrance
- If going on long road trips, make sure to stop and take frequent breaks and walk around for a few minutes before continuing
- If taking public transit, i.e. train, bus, subway, jostling movements may be uncomfortable.
- **DO NOT DRIVE AS IT IS ILLEGAL TO DO SO**

Walking

- This is the only recommended safe exercise while in your halo brace. It does not require bending, twisting, or lifting heavy objects
- Remember that even walking may be difficult in the beginning while you are getting used to the extra weight on your head
- If you feel unsteady on your feet, ask someone to walk with you until you are better able to balance yourself. Take care not to fall, because that can cause a variety of complications. Do not get discouraged; you will eventually get used to walking with your halo brace!
- Because you will be unable to turn your head, you will need to compensate for this loss of peripheral vision by remembering to turn your entire body. This is particularly important for safety when crossing the street

Grocery Shopping

- Remember that you cannot lift more than 5 lbs in each hand; therefore, you will not be able to carry large bags full of groceries. A bag of milk weighs approximately 5 lbs, and cans of soup weigh approximately 1-2 lbs each
- Ask for assistance with heavier bags, or ask the cashier to place fewer items in each bag, and take several trips
- If you will not have assistance with carrying heavy items home, ask the grocery store if they can deliver items to your door. Internet-based groceries can deliver fresh groceries to your home at competitive prices

Reading

- You may find initially that your vision is blurry and/or your eye muscles tire more quickly. This is a normal adjustment to the halo brace, and will likely resolve with time as you get used to the extra weight on your head
- You may find your arms will tire quickly from holding up a book to eye level for prolonged periods of time. A bookstand with prongs to keep the pages open can make reading more comfortable for you.

Using the Computer

- Make sure the monitor is at eye level so that you do not have to bend or extend your neck to see the screen
- Make sure to change your position every 30 minutes by taking a break and getting up for a walk

Alcohol Consumption

- You should avoid excessive alcohol intake

Sexual Activity

- With a gentle and caring partner, sexual activity may be resumed as tolerated, as long as it does not require you to bend, twist, or lift
- You may find it more comfortable to try different techniques and positions
- The person with the halo should be on top

In Case of Emergency, i.e. Cardiac arrest

- The anterior (front) portion of the vest must be removed to perform CPR
- Patient must be flat on the back portion of the vest
- Using the wrench, loosen the two bolts located on the front of the vest
- Release the side straps and rotate the front portion of the vest to expose the sternum
- You can use the back portion of the vest as the arrest board and perform CPR as necessary
- As long as the patient's body weight remains on the back shell, the back posts attached to the halo will help maintain some stability of the cervical spine

Removal of Halo Vest

- Twelve weeks may seem an eternity before the halo is removed, but it is necessary for the healing process to take place.
- You will have the proper tests done prior to removal of the halo to ensure that the bone has properly healed.
- It is a good idea to wash your hair prior to halo vest removal. You will not be able to wash your hair for 3 days after the halo vest has been removed, as you will need to allow the pin sites to scab over.
- The removal of the ring is not painful, but you may experience a feeling of pressure similar to pin tightening as the pins are loosened.
- Adhesive bandages may be used over the pin holes if they are oozing, but they should be left open to air at all times.
- You can massage the pin sites 2-3 times per day to minimize scarring.
- Once the scabs have fallen off, you may apply vitamin E oil to the pin sites if you wish.
- A removable neck collar will be fitted and you will be given instructions on its use. The collar is worn for a period of time that is individually determined by your health care provider.
- Because the muscles in your neck have not done any work for several weeks, your head will feel very heavy and your neck wobbly. The collar will help support your neck over the next several weeks.



CLOTHING SUGGESTIONS – HALO VEST APPARATUS

The ability to wear clothing while being stabilized in a halo vest is often of prime concern to people for appearance as well as for warmth. However, the structure of the halo vest apparatus generally precludes the wearing of regular clothing. Since the vest will be in place for approximately three months, some clothing alternatives should be considered.

1. Large size, front-opening sweaters or shirts can be worn directly over the vest, but usually cannot be fully fastened. Neck warmers could be purchased, opened on one side and secured with fasteners, velcro, etc. to provide additional comfort.
2. Shirts, t-shirts, and sweaters can be adapted to the halo vest, but will require some basic sewing alternations.
 - a) The shirt/sweater should be at least one size larger than is usually worn by the patient.
 - b) Measure the distance between the upright bars on the halo vest, and mark on the shirt.
 - c) Cut as illustrated in either diagram A or B. The openings can be secured with velcro, domes, buttons, etc. If velcro is used, it should be closed when the shirt is washed, so that it will not adhere to other garments.

Diagram A

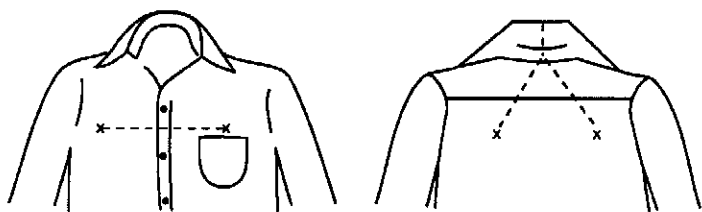
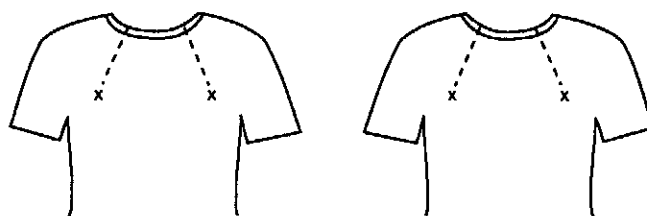
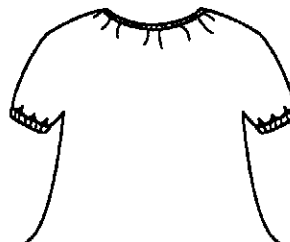


Diagram B



3. For women, short or long-sleeved tops with elasticized necks (diagram C), again at least one size larger, are easier to apply over the halo.

Diagram C



4. Stretchy tank tops may be worn underneath the vest, if desired. It is easiest to put these on feet first and pull it up to your waist. Then with assistance, gently push it under the halo vest and put your arms through the straps.

At the end of your treatment, any donations of halo-adapted clothing would be greatly appreciated.

Any questions or concerns please contact Tracy Anthony, RN, BSCN at 416 480-4902.

Thank you.