

# Instructions for Use: Med-Vac Pediatric Immobilizer

Note: This is a suggested guideline based on the procedures used at Washington University School of Medicine. Actual procedures will vary based on the physical condition of patient involved. Continue to follow required safety precautions in accordance with the current medical guidelines.

# Step 1: Prepare the Patient

- Suggestion: Adjust the feed schedule on the morning of the scan to ensure that the patient has been fed 30-45 minutes before scan time.
- Undress the patient down to diaper and remove any metallic monitoring leads and any dome fastener containing clothing items.



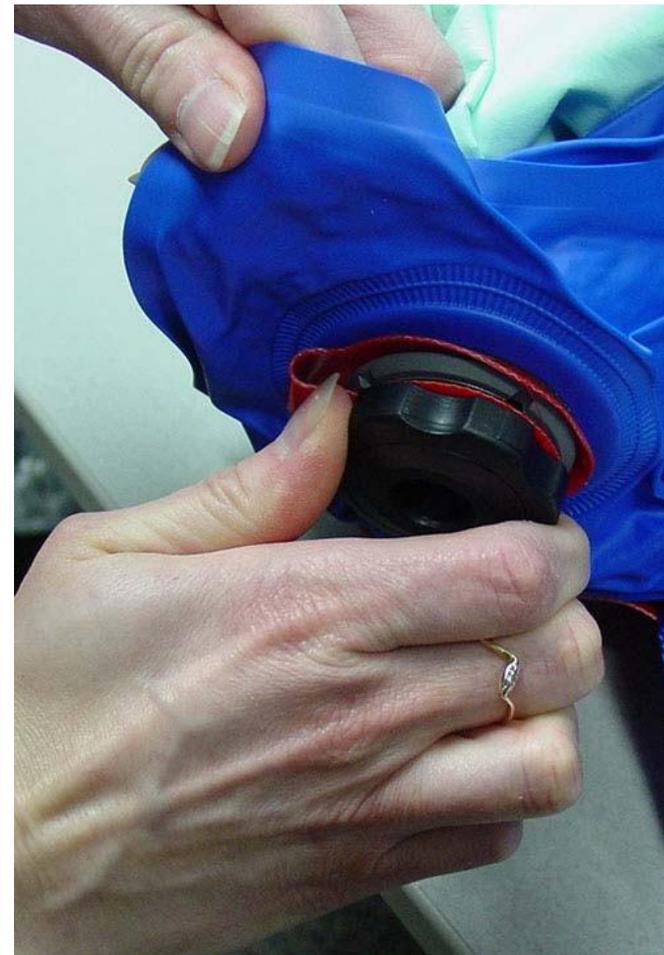
# Step 2: Wrap the Patient

- Wrap the patient snugly in 1-2 patient sheets in an old fashioned firm swaddle, leaving the head and one foot (the one with the transport pulse oximetry probe) exposed.



# Step 3: Close the Valve

- Rotate the valve on the Med-Vacbag clockwise until tight.  
**\*Note: Do the same if using wall suction!**



# Step 4 : Place Patient on Bag

- Place patient on the opened Med-Vac bag.



# Step 5: Wrap the Patient

- Wrap the bag firmly around the patient's torso, making sure to have enough of the material above the head to wrap around the head as well.



# Step 6: Wrap the Forehead

- Wrap the Velcro head strap around the patient's forehead and, if required, around the patient's chin as well.



# Step 7 : Prepare the Pump

- Attach one end the hose into fitting of pump in order to evacuate the air from the bag.
- For detailed information, see instructions printed on manual pump.
- If wall suction is provided at your facility, this can be used instead of purchasing pump.



# Step 8: Attach the Pump

- Attach the end of the hose to the valve on the Med-Vacbag.



# Step 9: Evacuate the Air

- While “cupping” the area of the bag wrapped around the head, evacuate the air using the attached pump.

**\*Note:** You cannot “over-pump” the bag. Air is being removed from the bag, not forced in, there is no danger of “squeezing” the patient.



# Step 10: Remove Hose

- Once air has been evacuated from the Med-Vac bag, the patient is now contained in a rigid cradle. Remove the hose from the valve.



# Step 11: Place Patient in Coil

- Transport the patient to the MRI room and place patient in coil.

**\*Note:** The patient can be carried by the mother or father into the MRI room in order to provide comfort to the patient and the parent.



# Step 12: Run the Scan

- Conduct MRI scan. If patient awakens and cries without settling down, he/she may need to come out and be gently rocked. This can be successfully accomplished with the patient still in the vacuum bag.



# Step 13: Unbuckle the Patient

- After the scan is complete, remove the patient from the coil and unbuckle the straps.



# Step 14: Open the Valve

- Rotate the valve on Med-Vacbag counter-clockwise to release the vacuum. The Med-Vac will relax as air flows back in.



# Step 15: Remove Patient

- Remove patient from the Med-Vac and return him/her to ICU.
- Be sure to clean the Med-Vac after every use using water and a detergent. Avoid mechanical cleaning as it may damage the Med-Vac. Disinfect exclusively using alcohol-based (ethanol/propanol) disinfectants. When other substance classes are used, this might lead to irreversible damage of the surface and material. Do not use solvents.
- Store Med-Vac unbuckled on a flat surface.

All MedVac Immobilization Devices are “MRI Safe” as defined by FDA Consensus Standard ASTM F-2503-13. They are non-metallic and non-conductive, and have been used in thousands of MRI procedures with no reports of artifacting.

The MedVac Manual Vacuum Pump is “MRI Conditional” as defined by FDA Consensus Standard ASTM F-2503-13. It contains no magnetically attracted materials, so it may safely be taken into the magnet room. The pump does contain internal non-magnetic metal parts, which could be heated or cause artifacting if the pump was placed in the MRI bore during an imaging sequence. To avoid any possibility of imaging effects, the Manual Pump should be disconnected from the MedVac Immobilization Device and moved at least three meters away from the magnet before and during an imaging sequence.

The MedVac Electric Vacuum Pump is “MRI Unsafe”. This pump should only be used prior to transporting the infant into the magnet room for imaging. Do not take an electric pump into the magnet room for any reason, whether or not the MRI equipment is in use.

For more information, please refer to: “Guideline for Transporting, Stabilizing and Performing Brain MRI in Neonates Without Sedation”.

Dr. Amit Mathur MD, MCRP, Department of Pediatrics and Newborn Medicine, St. Louis Children's Hospital at the Washington University School of Medicine, St. Louis, MO.

MedVac Immobilization devices are FDA listed. The procedure outlines in this presentation are not endorsed by Washington University.