PADS AND DEVICE ARE STORED IN L5 EQUIPMENT ROOM

PADS NEED DRY SKIN, CAN ADHERE OVER HAIR, THEY CAN OVERLAP. LEAVE A FINGER GAP EITHER SIDE OF THE SPINE.

PREFERRABLY USE SMALL PADS (AS BETTER ADHERENCE) AND ADD A UNIVERSAL PAD IF REQUIRED OVER THE ABDOMEN TO ENSURE MAXIMAL COVER (AIMING 40% OF BODY SURFACE AREA). USE THE SIZING CHART ATTACHED TO THE DEVICE TO ASSIST WITH DECIDING WHAT SIZE PADS TO USE.

USING A RECTAL OR OESOPHAGEAL CORE TEMPERATURE PROBE, OUR REGULAR SENSORS CAN ATTACH TO THE ARCTIC SUN MACHINE. USE A SECONDARY SOURCE OF MEASUREMENT (E.G TYPANIC) HOURLY TO VARIFY ACCURACY OF THE TEMP READING.

ATTACH CONNETORS FROM THE PADS¹. TURN MACHINE ON – MAY TAKE APPROX 1 MIN TO REACH THERAPY SELECTION SCREEN. FOR NEURO PATIENTS, SELECT “NORMOTHERMIA” OPTION- 37°C. DO NOT ALTER THIS TARGET TEMP.

CHECK WATER RESERVOIR LEVEL- IF < 3 BARS, PRESS FILL RESERVOIR ON SCREEN AND FOLLOW THE INSTRUCTIONS, USING STERILE WATER, CONNECTED TO THE “FILL TUBE”².

PRESS START. TEMP SHOULD DECREASE APPROX 0.5°C– 1°C PER HOUR. HOURLY RECORD THE TEMP (VARIFY IT AGAINST ANOTHER MEANS OF TEMP MONITORING, E.G TYPANIC). ALSO, RECORD HOURLY WATER TEMP AND FLOW RATE – INPUT INTO THE COOLING SECTION UNDER THE NEURO TAB ON METAVISION. ASSESS SHIVERING HOURLY USING THE BEDSIDE SHIVERING ASSESSMENT SCALE (BSAS).

ALSO ENSURE INFLAMMATORY MARKERS ARE MEASURED AT LEAST DAILY.

PARTIALLY PEEL BACK PADS 4 TO 6 HRYL TO CHECK FOR PRESSURE DAMAGE. IT IS NOT NECESSARY TO WASH UNDER THE PADS.
AVOIDING SHIVERING

ROUTINELY EMPLOY COUNTER WARMING MEASURES FROM THE OUTSET. THESE ARE SHOWN TO REDUCE THE INCIDENCE OF SHIVERING- BLANKETS WRAPPED AROUND ARMS AND LEGS, AND CONSIDER BAIR HUGGER DEVICE.

HOURLY ASSESS SHIVERING USING BEDSIDE SHIVERING ASSESSMENT SCALE (BSAS):

0 – NONE: NO SHIVERING

1 – MILD: SHIVERING LOCALISED TO NECK/THORAX, MAY BE SEEN ONLY AS ARTIFACT ON ECG OR FELT BY PALPATION

2 – MODERATE: INTERMITTENT INVOLVEMENT OF THE UPPER EXTREMITIES +/- THORAX

3 – SEVERE: GENERALIZED SHIVERING OR SUSTAINED UPPER/LOWER EXTREMITY SHIVERING

CONSIDER INCREASED SEDATION AND POSSIBLY NEUROMUSCULAR BLOCKADE IF INEFFECTIVE

XRAY/CT/ MRI- THE PADS ARE RADIO OPAQUE AND SAFE IN THE SCANNER. PRIOR TO GOING TO SCAN, PRESS STOP AND EMPTY THE PADS AS PROMPTED. THEN DISCONNECT THE PADS. THE PADS SHOULD REMAIN COOL FOR APPROX. 40 MINS. THE MACHINE CAN BE TURNED OFF, THEN YOU CAN RESUME THE SAME PATIENT SETTINGS WHEN YOU TURN IT BACK ON BY CHOOSING CURRENT’

FOR PATIENTS GOING TO THEATRE- THE PADS WILL NEED TO BE REMOVED. USE THE BACKING SHEETS ON THE PADS TO HELP MAINTAIN MOISTURE IN THE HYDROGEL AND RE-APPLY ON RETURN FROM THEATRES IF THERAPY IS TO BE CONTINUED.

PAD REPLACEMENT- THE PADS LAST UP TO 5 DAYS. PLEASE NOTE THE DATE PLACED ON THE PADS. CONSIDER KEEPING THE PADS ON THROUGHOUT THE FIVE DAYS EVEN IF THE PATIENT IS MAINTAINING NORMOTHERMIA. ONLY REMOVE IF NEUROPROTECTIVE MEASURES ARE NO LONGER BEING EMPLOYED FOR THE PATIENT. THE WATER TEMP HELPS TO INDICATE WHETHER ACTIVE COOLING IS STILL REQUIRED AFTER 5 DAYS, WHEREBY THE PADS SHOULD BE REPLACED.

IF TARGET TEMP ISN’T BEING ACHIEVED, CONSIDER: IF STARTING TEMP V.HIGH (OVER 40°C) MAYBE GIVE COLD SALINE CHALLENGE FIRST. IF INSUFFICIENT SURFACE AREA COVERED BY PADS, MAY NEED ADDITIONAL UNIVERSAL PAD ON ABDOMEN. IF LOW WATER RESERVOIR LEVEL/KINK IN TUBING/TUBING NOT SECURELY CONNECTED THIS COULD CAUSE LOW FLOW RATE (< 2.3L/min).

THE WATER TEMP- THIS INDICATES HOW HARD THE MACHINE IS WORKING TO ACHIEVE TARGET TEMPERATURE. A LOWERING WATER TEMP MAY INDICATE A WORSENING SEPSIS OR ANOTHER CAUSE (E.G. HYPOTHALMIC INJURY, SEIZURE) WHICH WOULD OTHERWISE HAVE CAUSED A RAISED TEMPERATURE. IT IS CLINICALLY USEFUL/ IMPORTANT TO OBSERVE THE TREND IN WATER TEMP.

STOPPING TREATMENT- DO NOT DISCONTINUE THE TREATMENT WHILST THE MACHINE STILL HAS TO WORK HARD TO ACHIEVE THE GOAL TEMP. IDEALLY, WAIT UNTIL THE WATER TEMPERATURE IS CONSISTENTLY READING ≥ 25oC.

REMEMBER TO EMPTY PADS (AS PROMPTED) AFTER STOPPING THE TREATMENT.