

# Barnes-Jewish Hospital & Washington University

## Antishivering Pathway

Note: Individualized, clinical judgment supersedes all written guidelines

Induced Hypo/Normothermia

$\leq 36-37^{\circ}\text{C}$

1. Acetaminophen
  - Start with 1000 mg PO/PT q6 hours or 650 mg PR q6 hours
2. Bair Hugger Therapy at  $43^{\circ}$
3. Buspirone 10-30 mg PO/PT q8 hours
4. Magnesium Sulfate (per SICU magnesium repletion):
  - Goal of 3-3.5 mg/dL
  - Monitor serum Mg q8-12 hours
5. Separate cool line from skin, avoid cold exposure

Goal BSAS 0

\*If shivering is contributing to increased ICP, increased sedation or paralysis should be considered in the interim as other measures take effect\*

Consider initiating treatment with IV medications if poor GI absorption is suspected

Clinical assessment and if needed EEG to differentiate from seizure activity

BSAS >1

1. Add dexmedetomidine and titrate per the ICU sedation orderset (avoid if patient is bradycardic or hypotensive), OR
2. Meperidine 12.5-25 mg IV/PO/PT q6 hours PRN (avoid in renal dysfunction)
  - Caution: May increase ICP in patients with intracranial hypertension, lowers seizure threshold, caution with concomitant seroternergic medications monitor respiratory status if patient on IV meperidine and not intubated

Shivering

$\leq 34-36^{\circ}\text{C}$

Patient Intubated

BSAS >1

1. Start IV propofol OR IV midazolam and titrate per the ICU sedation orderset

Shivering

BSAS >1

1. Neuromuscular Blockade

- Cisatracurium infusion 2 mcg/kg/min, titrate to a TOF ¼ twitches and monitor BIS



Step-down/Discontinuation:

(In reverse order, starting with therapies initiated at the end first)

Patients on induced barbiturate coma do not need anti-shivering treatment until they are weaned from this therapy.

Appendix 1.

Bedside Shivering Assessment Scale (BSAS)

0-None: No shivering

1-Mild: Shivering localized to neck/thorax, may be seen only as artifact on ECG or felt by palpitation

2-Moderate: Intermittent involvement of the upper extremities +/- thorax

3-Severe: Generalized shivering or sustained upper/lower extremity shivering