

# EMERGENCY PROCEDURE

## for Morphine Intrathecal Overdose

*These instructions are intended for healthcare professionals who are not familiar with the SynchroMed™ Infusion System and/or who do not have access to Medtronic Refill Kits, but may need to stop drug flow for a patient who presents with symptoms of acute morphine overdose. Consult the patient's medical record or contact the patient's physician to confirm the drug or drug concentration within the pump reservoir.*

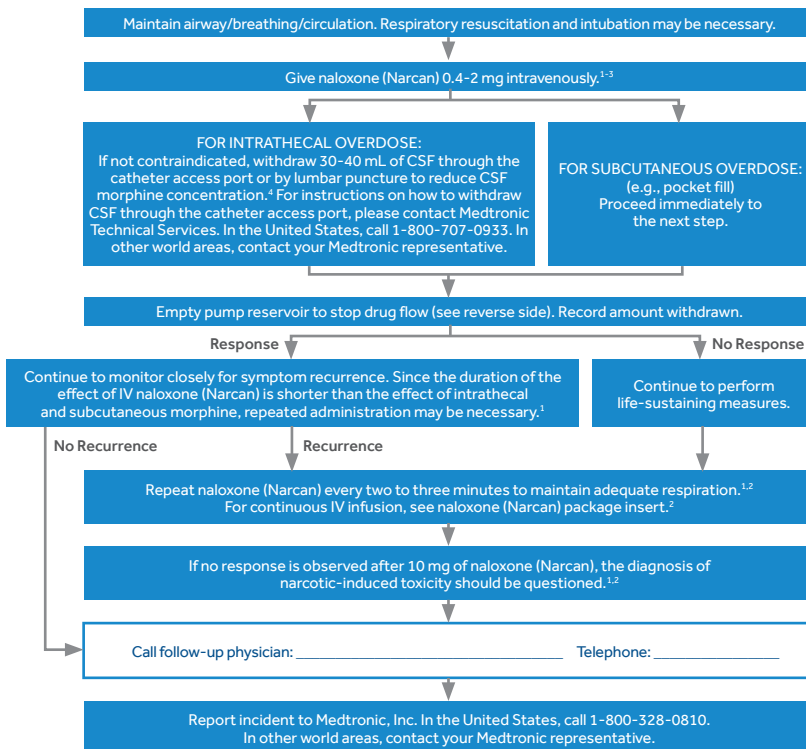
### Symptoms of Overdose

Respiratory depression with or without concomitant central nervous system depression (i.e., dizziness, sedation, euphoria, anxiety, seizures, respiratory arrest<sup>1</sup>).

### Medtronic SynchroMed™ Infusion System

The SynchroMed™ infusion system consists of an implantable programmable pump, catheter, and clinician programmer. The pump is implanted in the lower abdomen and dispenses medication from the pump's reservoir through the catheter to the intrathecal space. Some pumps are equipped with a catheter access port that bypasses the pump reservoir, permitting direct catheter access to the intrathecal space.

### Suggested Treatment for Morphine Intrathecal Overdose



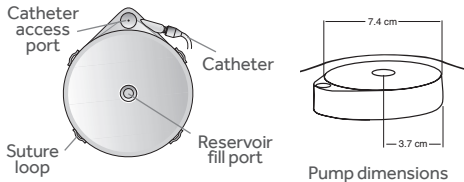
1. Infumorph (preservative-free morphine sulfate sterile solution) (labeled for intrathecal administration) manufacturer's package insert (West-Ward Pharmaceuticals).
2. Narcan (naloxone hydrochloride) manufacturer's package insert (Dupont).
3. Refer to the drug manufacturer's package insert for a complete list of indications, contraindications, warnings, precautions, adverse events, and dosage and administration information.
4. To access the catheter access port on a SynchroMed™ II pump, use a 24-gauge needle.

*In the United States, emergency technical support is available 24 hours a day for clinicians managing patients with SynchroMed™ infusion system implants. Call Technical Services at 1-800-707-0933. In other world areas, contact your Medtronic representative.*

## Medtronic SynchroMed™ Pump Descriptions

Pump Name	Model	Catheter Access Port?	Reservoir Size
SynchroMed™ II	8637-40	Yes, funnel-shaped	40 mL
SynchroMed™ II	8637-20	Yes, funnel-shaped	20 mL

### SynchroMed™ II Pumps



## Emergency Procedure to Empty the Pump Reservoir

### Equipment:

- 22-gauge noncoring needle
- 20 mL syringe
- Three way stopcock or extension set with clamp
- Antiseptic agent

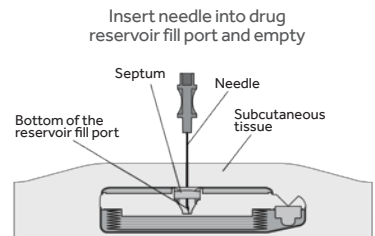
**Caution:** Do not spill or leak vesicant or cytotoxic drug into adjacent tissue during pump procedures. Spillage or leakage of vesicant drug into adjacent tissue can result in significant local tissue damage.

1. Assemble the needle, syringe, and stopcock or extension set.
2. Locate the pump by palpation. The reservoir fill port is located in the CENTER of the pump. If you have difficulty identifying the pump features, you may seek assistance from another clinician. If deemed necessary by the clinician, x-ray and fluoroscopy can be used to assist in locating or determining the orientation of the pump.
3. Prepare the injection site by cleansing the area using an antiseptic agent.
4. Gently insert the 22-gauge noncoring needle into the center of the reservoir fill port until the needle touches the bottom of the reservoir fill port.

During proper needle insertion, you will feel the needle pass through the patient's skin and subcutaneous tissue, hit the silicone septum (scar tissue, if present, can feel similar to the septum), pass through the septum, and hit the metal bottom of the reservoir fill port. (The top of the pump is metal, and hitting the top of the pump can feel similar to hitting the bottom of the reservoir fill port.)

If excessive resistance is encountered during needle insertion, reassess placement. Do not force the needle. The feel of abnormal resistance during the procedure may be an indication that the needle is not in the center of the reservoir fill port.

5. Open the clamp or stopcock and slowly withdraw the fluid from the reservoir into the empty syringe.
6. Depending on pump reservoir volume, more than one syringe may be needed to empty the pump. Close the clamp or stopcock when changing syringes.
7. Completely empty the pump. When the pump is empty, the bubbles will stop forming and negative pressure in the syringe can be felt.
8. Remove the needle from the reservoir fill port.
9. Record in patient chart the amount of fluid emptied from the pump reservoir.



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