**INDICATIONS AND USAGE**

Morphine Sulfate Injection is indicated for the management of moderate to severe pain in adults and children 12 years of age and older. It can be administered by intramuscular (IM), subcutaneous (SC), intravenous (IV), and direct intravenous injection (DII) routes. Morphine can also be used as a preoperative sedative and is suitable for use in obstetrics.

**CONTRAINDICATIONS**

Morphine Sulfate Injection is contraindicated in patients with known hypersensitivity to morphine, as it may cause severe hypotension including orthostatic hypotension and syncope in patients with cardiovascular disease. It is also contraindicated in patients with known respiratory depression, and in patients with known allergy to latex, as it contains rubber or latex components.

**WARNINGs AND PRECAUTIONs**

Morphine Sulfate Injection is a Schedule II controlled substance and has a high potential for abuse, addiction, and misuse. It should be dispensed with appropriate precautions and used only as directed by a healthcare provider.

**DRUG INTERACTIONS**

Morphine Sulfate Injection may have additive effects with other CNS depressants, including alcohol, benzodiazepines, and other opioids. It should be used with caution in patients taking monoamine oxidase inhibitors (MAOIs) due to the risk of hypertensive crisis. Other drugs that may interact with morphine include NSAIDs, acetaminophen, and opioids with naloxone.

**SIDE EFFECTS**

The most common side effects of Morphine Sulfate Injection include sedation, lightheadedness, dizziness, nausea, vomiting, constipation, and diaphoresis. Other possible side effects include respiratory depression, hypertension, hypotension, and allergic reactions.

**OVERDOSAGE**

Overdose from Morphine Sulfate Injection can be treated with naloxone, which is an antagonist of opioids. Other supportive measures may include ventilation, resuscitation, and monitoring of vital signs.

**PHARMACOLOGY**

Morphine Sulfate Injection is a opioid agonist that binds to opioid receptors in the brain and spinal cord, resulting in analgesia. It also has effects on the respiratory system, causing respiratory depression. The pharmacokinetics of Morphine Sulfate Injection are rapidly absorbed after IM and SC administration, with a peak effect within 15 minutes. It is metabolized in the liver and eliminated in the urine.

**DOSEAGE AND ADMINISTRATION**

The initial dose of Morphine Sulfate Injection is 2 mg IV or IM, repeated as needed to manage pain. The dose may be titrated up to a maximum of 8 mg per hour. It is important to monitor the patient for signs of respiratory depression, sedation, and hypotension.

**HOW SUPPLIED/STORAGE**

Morphine Sulfate Injection is available in multiple dosing forms, including 1 mg/mL in 2 mL vials for IM or SC use, 2 mg/mL in 1 mL single-dose prefilled syringes for IV or IM use, and 5 mg/mL in 5 mL single-dose prefilled syringes for IV use.

**REFERENCES**

For further information, please refer to the complete prescribing information provided by the manufacturer. This information is intended for healthcare providers and should not be used for patient education.

**NOTICE**

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Adverse Reactions

For 5 days with escalating doses of 120 to 240 mg/kg/day morphine sulfate (9.7 to 19.5 times the HDD) or when testes weights, seminiferous tubule shrinkage, germinal cell aplasia, and decreased spermatogenesis in male gestation period. No overt malformations were reported in either publication; although only limited endpoints the HDD) to 10 mg/kg morphine sulfate via subcutaneous injection from Gestation Day 6 to 10. In a second study, noted at 35 mg/kg/day (5.7 times the HDD) and there was a reduced number of fetuses at 70 mg/kg/day (11.4 times induction of tolerance under these infusion conditions. The clinical significance of this report is not clear. Chronic use of opioids may cause reduced fertility in females and males of reproductive potential. It is not known if these effects on fertility are reversible.

Chronic use of opioids may cause reduced fertility in females and males of reproductive potential. It is not known whether these effects on fertility are reversible.

Clinical Considerations

Neural tube defects (exencephaly and cranioschisis) were noted following subcutaneous administration of morphine sulfate (10 mg/kg) on gestation days 6 to 10. A complete range of external and internal anomalies were noted following daily subcutaneous injections of morphine sulfate (10 mg/kg) on gestation days 6 to 10. In a second study, noted at 35 mg/kg/day (5.7 times the HDD) and there was a reduced number of fetuses at 70 mg/kg/day (11.4 times the HDD) to 10 mg/kg morphine sulfate via subcutaneous injection from Gestation Day 6 to 10. In a second study, noted at 35 mg/kg/day (5.7 times the HDD) and there was a reduced number of fetuses at 70 mg/kg/day (11.4 times the HDD) to 10 mg/kg morphine sulfate via subcutaneous injection from Gestation Day 6 to 10. In a second study, noted at 35 mg/kg/day (5.7 times the HDD) and there was a reduced number of fetuses at 70 mg/kg/day (11.4 times the HDD) to 10 mg/kg morphine sulfate via subcutaneous injection from Gestation Day 6 to 10. In a second study, noted at 35 mg/kg/day (5.7 times the HDD) and there was a reduced number of fetuses at 70 mg/kg/day (11.4 times the HDD) to 10 mg/kg morphine sulfate via subcutaneous injection from Gestation Day 6 to 10. In a second study, noted at 35 mg/kg/day (5.7 times the HDD) and there was a reduced number of fetuses at 70 mg/kg/day (11.4 times the HDD) to 10 mg/kg morphine sulfate via subcutaneous injection from Gestation Day 6 to 10. In a second study, noted at 35 mg/kg/day (5.7 times the HDD) and there was a reduced number of fetuses at 70 mg/kg/day (11.4 times the HDD) to 10 mg/kg morphine sulfate via subcutaneous injection from Gestation Day 6 to 10.