**OXYTOCIN- oxytocin injection**
**Hikma Pharmaceuticals USA Inc.**

---

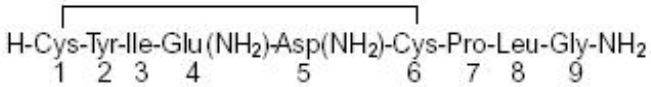
**Oxytocin Injection, USP (synthetic)**

**FOR INTRAVENOUS INFUSION OR INTRAMUSCULAR USE**

**Rx only**

## DESCRIPTION

Each mL of Oxytocin Injection sterile solution contains an oxytocic activity equivalent to 10 USP Posterior Pituitary Units, Chlorobutanol (a chloroform derivative), 0.5%, as a preservative, and acetic acid to adjust pH (3.0 to 5.0). Oxytocin is intended for IM or IV use. Oxytocin is a synthetic polypeptide; it occurs as a white powder and is soluble in water. It may be designated chemically as:




## CLINICAL PHARMACOLOGY

The pharmacologic and clinical properties of oxytocin are identical with those of naturally occurring oxytocin principle of the posterior lobe of pituitary. Oxytocin exerts a selective action on the smooth musculature of the uterus, particularly toward the end of pregnancy, during labor, and immediately following delivery. Oxytocin stimulates rhythmic contractions of the uterus, increases the frequency of existing contractions, and raises the tone of the uterine musculature.

When given in appropriate doses during pregnancy, oxytocin is capable of eliciting graded increases in uterine motility from a moderate increase in the rate and force of spontaneous motor activity to sustained titanic contraction. The sensitivity of the uterus to oxytocic activity increases progressively throughout pregnancy until term when it is maximal.

Oxytocin is distributed throughout the extracellular fluid. Small amounts of this drug probably reach the fetal circulation. Oxytocin has a plasma half-life of about 3 to 5 minutes. Following parenteral administration, uterine response occurs within 3 to 5 minutes and persists for 2 to 3 hours. Its rapid removal from plasma is accomplished largely by the kidney and the liver. Only small amounts oxytocin are excreted in the urine unchanged.

## INDICATIONS AND USAGE

**IMPORTANT NOTICE**
Oxytocin is indicated for the medical rather than the elective induction of labor. Available data and information are inadequate to define the benefits-to-risks considerations in the use of the drug product for elective induction. Elective induction of labor is defined as the initiation of labor for convenience in an individual with a term pregnancy who is free of medical indications.

### Antepartum

Oxytocin is indicated for the initiation or improvement of uterine contractions, where this is desirable and considered suitable for reasons of fetal or maternal concern, in order to achieve early vaginal

delivery. It is indicated for (1) induction of labor in patients with a medical indication for the initiation of labor, such as Rh problems, maternal diabetes, preeclampsia at or near term, when delivery is in the best interests of mother and fetus or when membranes are prematurely ruptured and delivery is indicated; (2) stimulation or reinforcement of labor, as in selected cases of uterine inertia; (3) as adjunctive therapy in the management of incomplete or inevitable abortion. In the first trimester, curettage is generally considered primary therapy. In second trimester abortion, oxytocin infusion will often be successful in emptying the uterus. Other means of therapy, however, may be required in such cases.

**Postpartum**

Oxytocin is indicated to produce uterine contractions during the third stage of labor and to control postpartum bleeding or hemorrhage.

## CONTRAINDICATIONS

Oxytocin is contraindicated in any of the following conditions:

significant cephalopelvic disproportion;

unfavorable fetal positions or presentations which are undeliverable without conversion prior to delivery, e.g., transverse lies;

in obstetrical emergencies where the benefit-to-risk ratio for either the fetus or the mother favors surgical intervention;

in cases of fetal distress where delivery is not imminent;

hypertonic uterine patterns;

hypersensitivity to the drug.

Prolonged use in uterine inertia or severe toxemia is contraindicated.

Oxytocin should not be used in cases where vaginal delivery is not indicated, such as cord presentation or prolapse, total placenta previa, and vasa previa.

## WARNINGS

Oxytocin, when given for induction or stimulation of labor, must be administered only by intravenous infusion (drip method) and with adequate medical supervision in a hospital.

## PRECAUTIONS

**General**

1. All patients receiving intravenous infusions of oxytocin must be under continuous observation by trained personnel with a thorough knowledge of the drug and are qualified to identify complications. A physician qualified to manage any complications should be immediately available.
2. When properly administered, oxytocin should stimulate uterine contractions similar to those seen in normal labor. Overstimulation of the uterus by improper administration can be hazardous to both mother and fetus. Even with proper administration and adequate supervision, hypertonic contractions can occur in patients whose uteri are hypersensitive to oxytocin.
3. Except in unusual circumstances, oxytocin should not be administered in the following conditions: prematurity, borderline cephalopelvic disproportion, previous major surgery on the cervix or uterus, including cesarean section, overdistention of the uterus, grand multiparity, or invasive cervical carcinoma. Because of the variability of the combinations of factors which may be present in the conditions listed above, the definition of “unusual circumstances” must be left to the judgment

of the physician. The decision can only be made by carefully weighing the potential benefits which oxytocin can provide in a given case against the rare occurrence of hypertonicity or tetanic spasm with this drug.

4. Maternal deaths due to hypertensive episodes, subarachnoid hemorrhage, rupture of the uterus, and fetal deaths and permanent CNS or brain damage of the infant due to various causes have been reported to be associated with the use of parenteral oxytocic drugs for induction of labor or for augmentation in the first and second stages of labor.
5. Oxytocin has been shown to have an intrinsic antidiuretic effect, acting to increase water reabsorption from the glomerular filtrate. Consideration should, therefore, be given to the possibility of water intoxication, particularly when oxytocin is administered continuously by infusion and the patient is receiving fluids by mouth.
6. Oxytocin should be considered for use only in patients who have been carefully selected. Pelvic adequacy must be considered and maternal and fetal conditions thoroughly evaluated before use of the drug.

**Drug Interactions**

Severe hypertension has been reported when oxytocin was given three to four hours following prophylactic administration of a vasoconstrictor in conjunction with caudal-block anesthesia. Cyclopropane anesthesia may modify oxytocin's cardiovascular effects, so as to produce unexpected results such as hypotension. Maternal sinus bradycardia with abnormal atrioventricular rhythms has also been noted when oxytocin was used concomitantly with cyclopropane anesthesia.

**Carcinogenesis, Mutagenesis, Impairment of Fertility**

There are no animal or human studies on the carcinogenicity and mutagenicity of this drug, nor is there any information on its effect on fertility.

**Pregnancy**

PREGNANCY CATEGORY C.

There are no known indications for use of oxytocin in the first and second trimester of pregnancy other than in relation to spontaneous or induced abortion. Based on the wide experience with this drug and its chemical structure and pharmacological properties, it would not be expected to present a risk of fetal abnormalities when used as indicated.

NONTERATOGENIC EFFECTS

See "**ADVERSE REACTIONS**" in the fetus or infant.

**Labor and Delivery**

See "**INDICATIONS AND USAGE**"

**Nursing Mothers**

It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when oxytocin is administered to a nursing woman.

**ADVERSE REACTIONS**

The following adverse reactions have been reported in the mother:

| | |
|---|---|
| Anaphylactic reaction | Nausea |
| Postpartum hemorrhage | Vomiting |
| Cardiac arrhythmia | Premature ventricular contractions |

Fatal afibrinogenemia Pelvic hematoma

Excessive dosage or hypersensitivity to the drug may result in uterine hypertonicity, spasm, tetanic contraction, or rupture of the uterus.

The possibility of increased blood loss and afibrinogenemia should be kept in mind when administering the drug.

Severe water intoxication with convulsions and coma has occurred, associated with a slow oxytocin infusion over a 24-hour period. Maternal death due to oxytocin-induced water intoxication has been reported.

The following adverse reactions have been reported in the fetus or infant:

(Due to induced uterine motility)

Bradycardia

Premature ventricular contractions and other arrhythmias

Permanent CNS or brain damage

Fetal death

(Due to use of oxytocin in the mother)

Low Apgar scores at five minutes

Neonatal jaundice

Neonatal retinal hemorrhage

## OVERDOSAGE

Overdosage with oxytocin depends essentially on uterine hyperactivity whether or not due to hypersensitivity to this agent. Hyperstimulation with strong (hypertonic) or prolonged (tetanic) contractions, or a resting tone of 15 to 20 mm $H_2O$ or more between contractions can lead to tumultuous labor, uterine rupture, cervical and vaginal lacerations, postpartum hemorrhage, utero-placental hypoperfusion, and variable deceleration of fetal heart, fetal hypoxia, hypercapnia, or death. Water intoxication with convulsions, which is caused by the inherent antidiuretic effect of oxytocin, is a serious complication that may occur if large doses (40 to 50 milliunits/minute) are infused for long periods. Management consists of immediate discontinuation of oxytocin and symptomatic and supportive therapy.

## DOSAGE AND ADMINISTRATION

Parenteral drug products should be inspected visually for particulate matter and discoloration prior to administration, whenever solution and container permit.

Dosage of oxytocin is determined by the uterine response. The following dosage information is based upon various regimens and indications in general use.

### A. Induction or Stimulation of Labor

Intravenous infusion (drip method) is the only acceptable method of administration for the induction or stimulation of labor.

Accurate control of the rate of infusion flow is essential. An infusion pump or other such device and frequent monitoring of strength of contractions and fetal heart rate are necessary for the safe administration of oxytocin for the induction or stimulation of labor. If uterine contractions become too powerful, the infusion can be abruptly stopped, and oxytocic stimulation of the uterine musculature will soon wane.

1. An intravenous infusion of nonoxytocin-containing solution should be started. Physiologic electrolyte solution should be used except under unusual circumstances.
2. To prepare the usual solution for infusion, 1-mL Oxytocin Injection, 10 USP Units/mL is combined aseptically with 1,000 mL of nonhydrating diluent (physiologic electrolyte solution). The combined solution, rotated in the infusion bottle to ensure thorough mixing, containing 10 mU/mL. Add the container with dilute oxytocic solution to the system through use of a constant infusion pump or other such device, to control accurately the rate of infusion.
3. The initial dose should be no more than 1 to 2 mU/min. the dose may be gradually increased in increments of no more than 1 to 2 mU/min. until a contraction pattern has been established which is similar to normal labor.
4. The fetal heart rate, resting uterine tone, and the frequency, duration, and the force of contractions should be monitored.
5. The oxytocin infusion should be discontinued immediately in the event of uterine hyperactivity or fetal distress. Oxygen should be administered to the mother. The mother and the fetus must be evaluated by the responsible physician.

**B. Control of Postpartum Uterine Bleeding**

1. Intravenous Infusion (Drip Method):
   To control postpartum bleeding, 10 to 40 units of oxytocin may be added to 1,000 mL of a nonhydrating diluent (physiologic electrolyte solution) and run a rate necessary to control uterine atony.
2. Intramuscular Administration:
   1 mL (10 units) of oxytocin can be given after the delivery of the placenta.

**C. Treatment of Incomplete or Inevitable Abortion**

Intravenous infusion with physiologic saline solution, 500 mL, or 5% dextrose in physiologic saline solution to which 10 units of oxytocin have been added should be infused at a rate of 20 to 40 drops per minutes.

## HOW SUPPLIED

Oxytocin Injection, USP (synthetic), 10 USP units per mL is packaged in single or multiple dose vial and supplied as follows:

| NDC | Vial Size | Fill Volume | Usage | Package size |
|---|---|---|---|---|
| 0641-6114-25 | 2 mL | 1 mL | Single Dose Vial | 25 |
| 0641-6115-25 | 10 mL | 10 mL | Multiple Dose Vial | 25 |

**Store at 25°C (77°F); excursions permitted to 15–30°C (59-86°F)** [See USP Controlled Room Temperature].

**Do not freeze. Do not use if solution is discolored or contains a precipitate.**

To report SUSPECTED ADVERSE REACTIONS, contact West-Ward Pharmaceutcial Corp. at 1-877-845-0689, or the FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

For Product Inquiry call 1-877-845-0689.

Manufactured by:
by Gland Pharma Limited
Hyderabad-India

Distributed by:

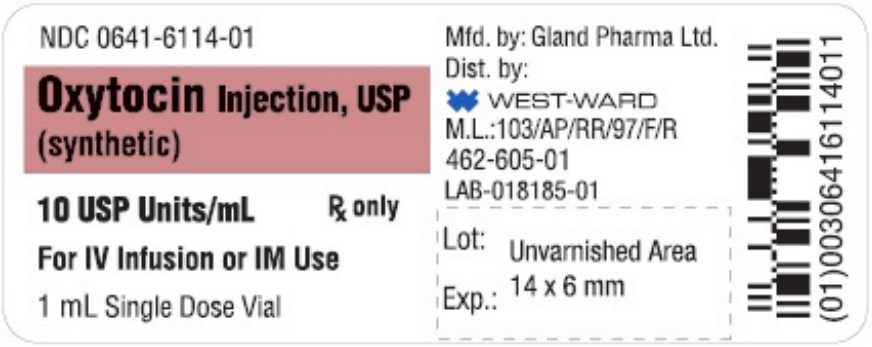
**WEST-WARD**
**PHARMACEUTCIALS**
Eatontown, NJ 07724 USA

Revised June 2011

462-604-00

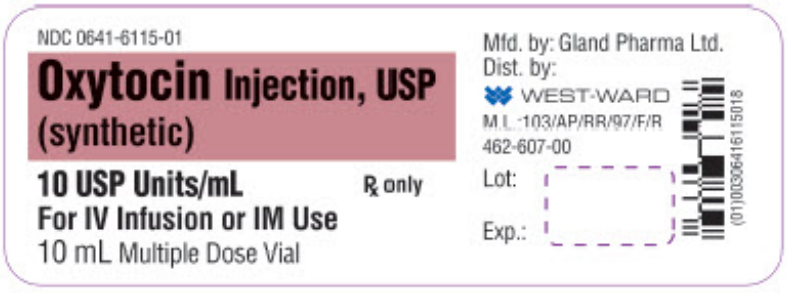
**PRINCIPAL DISPLAY PANEL**

NDC 0641-6114-01
Oxytocin Injection, USP (synthetic)
10 USP Units/mL
For IV Infusion or IM Use
1 mL Single Dose Vial




**PRINCIPAL DISPLAY PANEL**

NDC 0641-6115-01
Oxytocin Injection, USP (synthetic)
10 USP Units/mL
For IV Infusion or IM Use
10 mL Multiple Dose Vial




| **OXYTOCIN** |
| --- |
| oxytocin injection |
| |

| Product Information | | | |
|---|---|---|---|
| **Product Type** | HUMAN PRESCRIPTION DRUG | **Item Code (Source)** | NDC:0641-6114 |
| **Route of Administration** | INTRAMUSCULAR, INTRAVENOUS | | |

| Active Ingredient/Active Moiety | | |
|---|---|---|
| **Ingredient Name** | **Basis of Strength** | **Strength** |
| **OXYTOCIN** (UNII: 1JQS135EYN) (OXYTOCIN - UNII:1JQS135EYN) | OXYTOCIN | 10 [USP'U] in 1 mL |

| Inactive Ingredients | |
|---|---|
| **Ingredient Name** | **Strength** |
| **CHLOROBUTANOL** (UNII: HM4YQM8WRC) | 500 mg in 1 mL |
| **ACETIC ACID** (UNII: Q40Q9N063P) | |
| **WATER** (UNII: 059QF0KO0R) | |

| Packaging | | | | |
|---|---|---|---|---|
| **#** | **Item Code** | **Package Description** | **Marketing Start Date** | **Marketing End Date** |
| **1** | NDC:0641-6114-25 | 25 in 1 CARTON | 04/29/1980 | |
| **1** | NDC:0641-6114-01 | 1 mL in 1 VIAL; Type 0: Not a Combination Product | | |

## Marketing Information

| Marketing Category | Application Number or Monograph Citation | Marketing Start Date | Marketing End Date |
|---|---|---|---|
| NDA | NDA018243 | 04/29/1980 | |

# OXYTOCIN

oxytocin injection

| Product Information | | | |
|---|---|---|---|
| **Product Type** | HUMAN PRESCRIPTION DRUG | **Item Code (Source)** | NDC:0641-6115 |
| **Route of Administration** | INTRAMUSCULAR, INTRAVENOUS | | |

| Active Ingredient/Active Moiety | | |
|---|---|---|
| **Ingredient Name** | **Basis of Strength** | **Strength** |
| **OXYTOCIN** (UNII: 1JQS135EYN) (OXYTOCIN - UNII:1JQS135EYN) | OXYTOCIN | 10 [USP'U] in 1 mL |

| Inactive Ingredients | |
|---|---|
| **Ingredient Name** | **Strength** |
| **CHLOROBUTANOL** (UNII: HM4YQM8WRC) | 500 mg in 1 mL |
| **ACETIC ACID** (UNII: Q40Q9N063P) | |

| | |
|---|---|
| **WATER** (UNII: 059QF0KO0R) | |

## Packaging

| # | Item Code | Package Description | Marketing Start Date | Marketing End Date |
|---|---|---|---|---|
| **1** | NDC:0641-6115-25 | 25 in 1 CARTON | 04/29/1980 | |
| **1** | NDC:0641-6115-01 | 10 mL in 1 VIAL; Type 0: Not a Combination Product | | |

## Marketing Information

| Marketing Category | Application Number or Monograph Citation | Marketing Start Date | Marketing End Date |
|---|---|---|---|
| NDA | NDA018243 | 04/29/1980 | |

## Labeler - Hikma Pharmaceuticals USA Inc. (946499746)

## Establishment

| Name | Address | ID/FEI | Business Operations |
|---|---|---|---|
| Gland Pharma Limited | | 918601238 | ANALYSIS(0641-6114, 0641-6115) , LABEL(0641-6114, 0641-6115) , MANUFACTURE(0641-6114, 0641-6115) |

Revised: 12/2019 Hikma Pharmaceuticals USA Inc.