**Zipsor**

*(diclofenac potassium)*

**Liquid Filled Capsules**

**Rx Only**

**HIGHLIGHTS OF PRESCRIBING INFORMATION**

These highlights do not include all the information needed to use Zipsor® safely and effectively. See full prescribing information for Zipsor.

**Zipsor® (diclofenac potassium) Liquid Filled Capsule**

**Initial U.S. Approval: [1988]**

**WARNING**

See full prescribing information for complete boxed warning.

- **Cardiovascular Risk**
  - NSAIDs may cause an increased risk of serious cardiovascular thrombotic events, myocardial infarction, and stroke, which can be fatal. This risk may increase with duration of use. Patients with cardiovascular disease or risk factors for cardiovascular disease may be at greater risk. (5.1)
  - Zipsor (diclofenac potassium) Liquid Filled Capsule is contraindicated for the treatment of perioperative pain in the setting of coronary artery bypass graft (CABG) surgery. (4)
- **Gastrointestinal Risk**
  - NSAIDs cause an increased risk of serious gastrointestinal adverse events including, bleeding, ulceration, and perforation of the stomach or intestines, which can be fatal. These events can occur at any time during use and without warning symptoms. Elderly patients are at greater risk for serious gastrointestinal events. (5.2)

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**INDICATIONS AND USAGE**

Zipsor is a nonsteroidal anti-inflammatory drug indicated for relief of mild to moderate acute pain. (1)

**DOSAGE AND ADMINISTRATION**

The dosage is 25 mg four times a day. (2)

**DOSE FORMS AND STRENGTHS**

- 25 mg Liquid Filled Capsule (3)

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**CONTRAINDICATIONS**

- Known hypersensitivity to diclofenac. (4)
- History of asthma, urticaria, or other allergic-type reactions after taking aspirin or other NSAIDs. (4)
- Use during the perioperative period in the setting of coronary artery bypass graft (CABG) surgery. (4)
- Zipsor contains gelatin and should not be given to patients with known hypersensitivity to bovine protein. (4)

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**WARNINGS AND PRECAUTIONS**

- Serious and potentially fatal cardiovascular (CV) thrombotic events, myocardial infarction, and stroke can occur with NSAID treatment. The lowest possible dose of Zipsor should be used in patients with known CV disease or risk factors for CV disease. (5.1)

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**ADVERSE REACTIONS**

Most common adverse reactions (incidence ≥ 1% of Zipsor 25 mg treated subjects) are gastrointestinal experiences including abdominal pain, constipation, diarrhea, increased sweating. (6)

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**DRUG INTERACTIONS**

- Concomitant administration of diclofenac and aspirin is not generally recommended because of the potential of increased adverse effects including increased GI bleeding. (7.1)
- Concomitant use of anticoagulants and diclofenac can have a risk of serious GI bleeding higher than users of either drug alone. (7.2)

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**USE IN SPECIFIC POPULATIONS**

- Pregnancy: Based on animal data, may cause fetal harm. Based on human data, starting at 30 weeks gestation, Zipsor should be avoided as premature closure of the ductus arteriosus in the fetus may occur. (5.9, 8.1)
- Nursing Mothers: Use with caution, as it is not known if diclofenac is excreted in human milk. (8.3)

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See 17 for PATIENT COUNSELING INFORMATION and Medication Guide.

**Revised: [12/2012]**
that increase the risk for GI bleeding in patients treated with NSAIDs include concomitant treatment with aspirin and an NSAID, such as diclofenac, does increase the risk of serious GI events [see Warnings and Precautions (5.7)].

2.2 Non-Interchangeability with Other Formulations of Diclofenac

Different formulations of oral diclofenac are not bioequivalent even if the milligram strength is the same. Therefore, it is not possible to convert dosing from any other formulation of diclofenac to Zipsor. The only approved dosing regimen for Zipsor is 25 mg four times a day.

3. DOSAGE FORMS AND STRENGTHS

Oral Liquid Filled Capsule 25 mg

5. WARNINGS AND PRECAUTIONS

5.1 Cardiovascular Thrombotic Events

Clinical trials of several COX-2 selective and nonselective NSAIDs of up to three years duration have shown an increased risk of serious cardiovascular (CV) thrombotic events, myocardial infarction, and stroke, which can be fatal. All NSAIDs, both COX-2 selective and nonselective, may have a similar risk. Patients with known CV disease or risk factors for CV disease may be at greater risk. To minimize the potential risk for an adverse CV event in patients treated with an NSAID, use the lowest effective dose for the shortest duration possible. Physicians and patients should remain alert for the development of such events, even in the absence of previous CV symptoms, inform patients about the signs and symptoms of serious CV events and the steps to take if they occur. Two large, controlled, clinical trials of a COX-2 selective NSAID for the treatment of pain in the first 10-14 days following CABG surgery found an increased incidence of myocardial infarction and stroke [see Contraindications (4)].

There is no consistent evidence that concurrent use of aspirin mitigates the increased risk of serious CV thrombotic events associated with NSAID use. The concurrent use of aspirin and an NSAID, such as diclofenac, does increase the risk of serious GI events [see Warnings and Precautions (5.3)].

5.2 Gastrointestinal (GI) Effects – Risk of GI Ulceration, Bleeding, and Perforation NSAIDs, including diclofenac, can cause serious gastrointestinal (GI) adverse events including, bleeding, ulceration, and perforation of the stomach, small intestine, or large intestine, which can be fatal. These serious adverse events can occur at any time, with or without warning symptoms, in patients treated with NSAIDs. Only one in five patients, who develop a serious upper GI adverse event on NSAID therapy, is symptomatic. Upper GI ulcers, gross bleeding or perforation caused by NSAIDs occur in approximately 1% of patients treated for 3-6 months, and in about 2%-4% of patients treated for one year. These trends continue with longer duration of use, increasing the likelihood of developing a serious GI event at some time during the course of therapy. However, even short-term NSAID therapy is not without risk.

Prescribe NSAIDs, including Zipsor, with extreme caution in patients with a prior history of ulcer disease or gastrointestinal bleeding. Patients with a prior history of peptic ulcer disease and/or GI bleeding who use NSAIDs have a greater than 10-fold increased risk for developing a GI bleed compared to patients with neither of these risk factors. Other factors that increase the risk for GI bleeding in patients treated with NSAIDs include concomitant use of oral corticosteroids or anticoagulants, longer duration of NSAID therapy, smoking, use of alcohol, older age, and poor general health status. Most spontaneous reports of fatal GI events are in elderly or debilitated patients, and therefore special care should be taken in treating this population.

To minimize the potential risk for an adverse GI event in patients treated with an NSAID, use the lowest effective dose for the shortest possible duration. Patients and physicians should remain alert for signs and symptoms of GI ulceration and bleeding during Zipsor therapy and promptly initiate additional evaluation and treatment if a serious GI adverse event is suspected. This should include discontinuation of Zipsor until a serious GI adverse event is ruled out. For high risk patients, alternative therapies that do not include NSAIDs should be considered.

5.3 Hepatic Effects

Borderline elevations (less than 3 times the upper limit of the normal [ULN] range) or greater elevations of transaminases occurred in about 15% of diclofenac-treated patients in clinical trials of indications other than acute pain. Of the markers of hepatic function, ALT (SGPT) is recommended for the monitoring of liver injury. In clinical trials of a diclofenac - misoprostol combination product, meaningful elevations (i.e., more than 3 times the ULN) of AST (SGOT) occurred in about 2% of approximately 5,700 patients at some time during diclofenac treatment (ALT was not measured in all studies).

In an open-label, controlled trial of 3,700 patients treated for 2-6 months, patients were monitored first at 8 weeks and 1,200 patients were monitored again at 24 weeks. Meaningful elevations of ALT and/or AST occurred in about 4% of the 3,700 patients and included marked elevations (>5 times the ULN) in about 1% of the 3,700 patients. In this open-label study, a higher incidence of borderline (less than 3 times the ULN), moderate (>3 times the ULN) and marked (>5 times the ULN) elevations of ALT or AST was observed in patients receiving diclofenac when compared to other NSAIDs. Elevations in transaminases were seen more frequently in patients with osteoarthritis than in those with rheumatoid arthritis. Almost all meaningful elevations in transaminases were detected before patients became symptomatic.

Abnormal tests occurred during the first 2 months of therapy with diclofenac in 42 of the 51 patients in all trials who developed marked transaminase elevations. In postmarketing reports, cases of drug-induced hepatotoxicity have been reported in the first month, and in some cases, the first 2 months of NSAID therapy.

Postmarketing surveillance has reported cases of severe hepatic reactions, including liver necrosis, jaundice, fulminant hepatis with and without jaundice, and liver failure. Some of these reported cases resulted in fatalities or liver transplantation. In a European retrospective population-based, case-controlled study, 10 cases of diclofenac associated drug-induced liver injury with current use compared with non-use of diclofenac were associated with a statistically significant 4-fold adjusted odds ratio of liver injury. In this particular study, based on an overall number of 10 cases of liver injury associated with diclofenac, the adjusted odds ratio increased further with female gender, doses of 150 mg or more, and duration of use for more than 90 days.

Physicians should measure transaminases (ALT and AST) periodically in patients receiving long-term therapy with diclofenac, because severe hepatotoxicity may develop without a proROME of distinguishing symptoms. The optimum times for making the first and subsequent transaminase measurements are not known. Based on clinical trial data and postmarketing experiences, transaminases should be monitored within 4 to 8 weeks after initiating treatment with diclofenac. If symptoms of liver injury develop, transaminases can occur at any time during treatment with diclofenac. If abnormal liver tests persist or worsen, if clinical signs and/or symptoms consistent with liver disease develop, or if systemic manifestations occur (e.g., eosinophilia, rash, abdominal pain, diarrhea, dark urine, etc.), discontinue diclofenac immediately.

To minimize the possibility that hepatic injury will become severe between transaminase measurements, inform patients of the warning signs and symptoms of hepatoxicity (e.g., nausea, fatigue, lethargy, diarrhea, pruritus, jaundice, right upper quadrant tenderness, and “flu-like” symptoms), and the appropriate action patients should take if these signs and symptoms appear.

To minimize the potential risk for an adverse liver-related event in patients treated with diclofenac, use the lowest effective dose for the shortest duration possible. Exercise caution when prescribing Zipsor with concomitant drugs that are known to be potentially hepatotoxic (e.g., acetaminophen, certain antibiotics, antiepileptics). Caution patients to avoid taking unprescribed acetaminophen while using Zipsor.

5.4 Hypertension

NSAIDs, including diclofenac, can lead to new onset or worsening of preexisting hypertension, either of which may contribute to the increased incidence of CV events. Use NSAIDs, including Zipsor, with caution in patients with hypertension. Monitor blood pressure (BP) closely during the initiation of NSAID treatment and throughout the course of therapy. Patients taking ACE inhibitors, thiazides or loop diuretics may have impaired response to hypertension therapy and promptly initiate additional evaluation and treatment if a serious GI adverse event is suspected. This should include discontinuation of Zipsor until a serious GI adverse event is ruled out. For high risk patients, alternative therapies that do not include NSAIDs should be considered.

5.5 Congestive Heart Failure and Edema

Fluid retention and edema have been observed in some patients taking NSAIDs. Use Zipsor with caution in patients with fluid retention or heart failure.

5.6 Renal Effects

Use caution when initiating treatment with Zipsor in patients with considerable dehydration. Long-term administration of NSAIDs has resulted in renal papillary necrosis and other renal injury. Renal toxicity has also been seen in patients in whom renal prostaglandins have a compensatory role in the maintenance of renal perfusion. In these patients, administration...
of an NSAID may cause a dose-dependent reduction in prostaglandin formation and, secondarily, in renal blood flow, which may precipitate overt renal decompensation. Patients at greatest risk of this reaction are those with impaired renal function, heart failure, liver dysfunction, those taking diuretics and ACE inhibitors, and the elderly. Discontinuation of NSAID therapy is usually followed by recovery to the pretreatment state.

No information is available from controlled clinical studies regarding the use of Zipsor in patients with advanced renal disease. Therefore, treatment with Zipsor is not recommended in patients with advanced renal disease. If Zipsor therapy must be initiated, close monitoring of the patient's renal function is advisable.

5.7 Anaphylactoid Reactions
As with other NSAIDs, anaphylactoid reactions may occur in patients without known prior exposure to Zipsor. Zipsor is contraindicated in patients with the aspirin triad. This symptom complex typically occurs in asthmatic patients who experience rhinitis with or without nasal polyps, or who exhibit severe, potentially fatal bronchospasm after taking aspirin or other NSAIDs [see Contraindications (4)].

5.8 Adverse Skin Reactions
NSAIDs, including diclofenac, can cause serious skin adverse reactions such as exfoliative dermatitis, Stevens-Johnson syndrome (SJS), and toxic epidermal necrolysis (TEN), which can be fatal. These serious events may occur without warning. Patients should be informed about the signs and symptoms of serious skin manifestations, and to discontinue Zipsor at the first appearance of skin rash or any other sign of hypersensitivity [see Contraindications (4)].

5.9 Pregnancy
Starting at 30 weeks gestation, Zipsor, as with other NSAIDs, should be avoided by pregnant women as premature closure of the ductus arteriosus in the fetus may occur.

5.10 Corticosteroid Treatment
Zipsor cannot be expected to substitute for corticosteroids or to treat corticosteroid insufficiency. Abrupt discontinuation of corticosteroids may lead to exacerbation of corticosteroid-responsive illness. Patients on prolonged corticosteroid therapy should have their therapy tapered slowly if a decision is made to discontinue corticosteroids.

5.11 Masking of Inflammation and Fever
The pharmacological activity of diclofenac in reducing inflammation, and possibly fever, may diminish the utility of diagnostic signs in detecting infectious complications of presumed noninfectious, painful conditions.

5.12 Hematological Effects
Anemia may occur in patients receiving NSAIDs. This may be due to fluid retention, occult or gross GI blood loss, or an incompletely described effect upon erythropoiesis. In patients on long-term therapy with NSAIDs, including diclofenac, check hemoglobin or hematocrit if they exhibit any signs or symptoms of anemia or blood loss. Zipsor is not indicated for long-term treatment.

NSAIDs inhibit platelet aggregation and have been shown to prolong bleeding time in some patients. Unlike aspirin, their effect on platelet function is quantitatively less, of shorter duration, and reversible. Carefully monitor patients treated with Zipsor who may be adversely affected by alterations in platelet function, such as those with coagulation disorders or patients receiving anticoagulants.

5.13 Use in Patients with Preexisting Asthma
Patients with asthma may have aspirin-sensitive asthma. The use of aspirin in patients with aspirin-sensitive asthma has been associated with severe bronchospasm which can be fatal. Since cross reactivity, including bronchospasm, between aspirin and other NSAIDs has been reported in such aspirin-sensitive patients, Zipsor is contraindicated in patients with this form of aspirin sensitivity and should be used with caution in all patients with preexisting asthma [see Contraindications (4)].

5.14 Monitoring
Because serious GI tract ulcerations and bleeding can occur without warning symptoms, physicians should monitor for signs or symptoms of GI bleeding. For patients on long-term treatment with NSAIDs, periodically check a CBC and a chemistry profile. Discontinue Zipsor if abnormal liver tests or renal tests persist or worsen. Zipsor is not indicated for long-term treatment.

6. ADVERSE REACTIONS
The following serious adverse reactions are discussed elsewhere in the labeling:
• Cardiovascular thrombotic events [see Boxed Warning and Warnings and Precautions (5.1)]
• Gastrointestinal effects [see Boxed Warning and Warnings and Precautions (5.2)]
• Hepatic effects [see Warnings and Precautions (5.3)]
• Hypertension [see Warnings and Precautions (5.4)]
• Congestive heart failure and edema [see Warnings and Precautions (5.5)]
• Renal effects [see Warnings and Precautions (5.6)]
• Anaphylactoid reactions [see Warnings and Precautions (5.7)]
• Serious skin reactions [see Warnings and Precautions (5.8)]

6.1 Clinical Study Experience
Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in clinical trials of a drug cannot be directly compared with the rates in clinical trials of another drug and may not reflect the rates observed in practice. The safety of Zipsor was evaluated in 965 subjects. In patients treated with Zipsor 25 mg (N=345) or a higher dose, three or four times a day, for 4 to 5 days, the most common adverse reactions (i.e., reported in ≥1% of Zipsor treated patients) were as follows: gastrointestinal experiences including abdominal pain, constipation, diarrhea, dyspepsia, nausea, vomiting, dizziness, headache, somnolence, pruritus, and increased sweating. (see Table 1)

| Table 1
| Incidence of Treatment Emergent Adverse Reactions with Incidence ≥ 1% of Zipsor Treated Patients in Multiple-Dose Studies |
|-----------------------------------------------|------------------|------------------|
| MedDRA System Organ Class and Preferred Term | Zipsor* n=345 (%) | Placebo* n=327 (%) |
| Any Adverse Events                           | 144 (41.7)       | 181 (55.4)       |
| Abdominal Pain                               | 24 (7.0)         | 11 (3.4)         |
| Constipation                                 | 11 (3.2)         | 9 (2.8)          |
| Diarrhea                                     | 8 (2.3)          | 9 (2.8)          |
| Dyspepsia                                    | 4 (1.2)          | 8 (2.4)          |
| Nausea                                       | 57 (16.5)        | 66 (20.2)        |
| Vomiting                                     | 20 (5.8)         | 26 (8.0)         |
| Dizziness                                    | 12 (3.5)         | 17 (5.2)         |
| Headache                                     | 43 (12.5)        | 56 (17.1)        |
| Somnolence                                   | 9 (2.6)          | 6 (1.8)          |
| Pruritus                                     | 5 (1.4)          | 6 (1.8)          |
| Sweating Increase                            | 4 (1.2)          | 2 (0.6)          |

*There was greater use of concomitant opioid rescue medication in placebo treated patients than in Zipsor treated patients.

In patients taking other NSAIDs, the most frequently reported adverse experiences occurring in approximately 1%–10% of patients are:
• Gastrointestinal experiences including: abdominal pain, constipation, diarrhea, dyspepsia, flatulence, gross bleeding/perforation, heartburn, nausea, GI ulcers (gastric/duodenal) and vomiting.
• Abnormal renal function, anemia, dizziness, edema, elevated liver enzymes, headaches, increased bleeding time, pruritus, rashes, and tinnitus.
• Additional adverse experiences reported in patients taking other NSAIDs occasionally include:
  Body as a Whole: fever, infection, sepsis
  Cardiovascular System: congestive heart failure, hypertension, tachycardia, syncope
  Digestive System: dry mouth, esophagitis, gastric/peptic ulcers, gastritis, gastrointestinal bleeding, glossitis, hematremesis, hepatitis, jaundice
  Hemic and Lymphatic System: ecchymosis, eosinophilia, leukopenia, melena, purpura, rectal bleeding, stomatitis, thrombocytopenia
  Metabolic and Nutritional: weight changes
  Nervous System: anxiety, asthenia, confusion, depression, dream abnormalities, drowsiness, insomnia, malaise, nervousness, paresthesia, somnolence, tremors, vertigo
  Respiratory System: asthma, dyspnea
  Skin and Appendages: alopecia, photosensitivity, sweating increased
  Special Senses: blurred vision
  Urogenital System: cystitis, dysuria, hematuria, interstitial nephritis, oliguria/polyuria, proteinuria, renal failure

Other adverse reactions in patients taking other NSAIDs, which occur rarely are:
Body as a Whole: anaphylactic reactions, appetite changes, death
Cardiovascular System: arrhythmia, hypotension, myocardial infarction, palpitations, vasculitis
Digestive System: colitis, eructation, liver failure, pancreatitis
Hemic and Lymphatic System: agranulocytosis, hemolytic anemia, aplastic anemia, lymphadenopathy, pancytopenia
Metabolic and Nutritional: hyperglycemia
Nervous System: convulsions, coma, hallucinations, meningitis
Respiratory System: respiratory depression, pneumonia
Skin and Appendages: angioedema, toxic epidermal necrolysis, erythema multiforme, exfoliative dermatitis, Stevens-Johnson syndrome, urticaria
Special Senses: conjunctivitis, hearing impairment

7. DRUG INTERACTIONS
7.1 Aspirin
When administered with aspirin, diclofenac’s protein binding is reduced. The clinical significance of this interaction is not known; however, as with other NSAIDs, concomitant administration of Zipsor and aspirin is not generally recommended because of the potential of increased adverse effects.

7.2 Anticoagulants
The effects of anticoagulants such as warfarin and NSAIDs on GI bleeding are synergistic, such that users of both drugs together have a risk of serious GI bleeding higher than that with use of either drug alone.
7.3 ACE-Inhibitors
NSAIDs may diminish the antihypertensive effect of angiotensin converting enzyme (ACE) inhibitors. This interaction should be given consideration in patients taking Zipsor concomitantly with ACE-inhibitors.

7.4 Diuretics
Clinical studies, as well as post-marketing observations, have shown that NSAIDs can reduce the natriuretic effect of furosemide and thiazides in some patients. This response has been attributed to inhibition of renal prostaglandin synthesis. During concomitant therapy of Zipsor and diuretics, observe patients closely for signs of renal failure [see Warnings and Precautions (5.6)], as well as to assure diuretic efficacy.

7.5 Lithium
NSAIDs have produced an elevation of plasma lithium levels and a reduction in renal lithium clearance. The mean minimum lithium concentration increased 15% and the renal clearance was decreased by approximately 20%. These effects have been attributed to inhibition of renal prostaglandin synthesis by the NSAID. Thus, when Zipsor and lithium are administered concurrently, observe patients carefully for signs of lithium toxicity.

7.6 Methotrexate
NSAIDs have been reported to competitively inhibit methotrexate accumulation in rabbit kidney slices. This indicates that NSAIDs may enhance the toxicity of methotrexate. Use caution when Zipsor is administered concomitantly with methotrexate.

7.7 Cyclosporine
Diclofenac, like other NSAIDs, may affect renal prostaglandins and increase the toxicity of certain drugs. Therefore, concomitant therapy with Zipsor may increase cyclosporine's nephrotoxicity. Use caution when Zipsor is administered concomitantly with cyclosporine.

7.8 Inhibitors or Substrates of Cytochrome P450 2C9 Other Considerations
Diclofenac is metabolized predominantly by cytochrome P450 2C9. Co-administration of diclofenac with another drug medication known to be metabolized by or that which inhibits Cytochrome P450 2C9 may unpredictably affect the pharmacokinetics of diclofenac or the co-administered drug medication. Caution should be used to evaluate each patient’s medical history when considering the use of Zipsor with Zipsor or other NSAIDs, co-administered with diclofenac.

8. USE IN SPECIFIC POPULATIONS

8.1 Pregnancy
Teratogenic Effects: Pregnancy Category C prior to 30 weeks gestation; Category D starting 30 weeks gestation.

Starting at 30 weeks gestation, Zipsor, and other NSAIDs, should be avoided by pregnant women as premature closure of the ductus arteriosus in the fetus may occur. Zipsor can cause fetal harm when administered to a pregnant woman starting at 30 weeks gestation. If this drug is used during this time period in pregnancy, the patient should be apprised of the potential hazard to a fetus. There are no adequate and well-controlled studies in pregnant women. Prior to 30 weeks gestation, Zipsor should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus. Reproductive studies have been performed in mice given diclofenac sodium (up to 20 mg/kg/day or 60 mg/m²/day) and in rats and rabbits given diclofenac sodium (up to 10 mg/kg/day or 60 mg/m²/day for rats, and 80 mg/m²/day for rabbits, 1-fold and 2-fold an adult human daily dose of 100 mg/day, respectively), and have revealed no evidence of teratogenicity despite the induction of maternal toxicity and fetal toxicity. In rats, maternally toxic doses were associated with dystocia, prolonged gestation, reduced fetal weights and growth, and reduced fetal survival. Diclofenac has been shown to cross the placental barrier in mice, rats, and humans. Literature studies have shown that diclofenac has been shown to exert direct teratogenic effects on rat embryos in vitro at concentrations of 7.5 and 15 µg/mL, and diclofenac exposure to pregnant rats (1 mg/kg, IP) can lead to prolonged gestation as well as liver toxicity and neuronal loss in offspring.

8.2 Labor and Delivery
The effects of Zipsor on labor and delivery in pregnant women are unknown. In rat studies maternal exposure to NSAIDs, as with other drugs known to inhibit prostaglandin synthesis, increased incidence of dystocia, delayed parturition, and decreased pup survival.

8.3 Nursing Mothers
It is not known whether this drug is excreted in human milk; however, there is a case report in the literature indicating that diclofenac can be detected at low levels in breast milk. Because many drugs are excreted in human milk and because of the potential for serious adverse reactions in nursing infants from Zipsor, a decision should be made whether to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.

8.4 Pediatric Use
The safety and effectiveness of Zipsor in pediatric patients has not been established.

8.5 Geriatric Use
Clinical studies of Zipsor did not include sufficient numbers of subjects aged 65 and over to determine whether they respond differently from younger subjects. Other reported clinical experience has not identified differences in responses between the elderly and younger patients. In general, dose selection for an elderly patient should be cautious, usually starting at the low end of the dosage range, reflecting the greater frequency of decreased hepatic, renal, or cardiac function, and concomitant disease or other drug therapy.

Diclofenac is known to be substantially excreted by the kidney, and the risk of adverse reactions to this drug may be greater in patients with impaired renal function. Because elderly patients are more likely to have decreased renal function, care should be taken in dose selection, and it may be useful to monitor renal function. Older age increases the risk for GI bleeding. Most spontaneous reports of fatal GI events are in elderly or debilitated patients, and therefore special care should be taken in treating this population [see Gastrointestinal (GI) Effects – Risk of GI Ulceration, Bleeding, and Perforation (5.2)].

10. OVERDOSAGE
Symptoms following acute NSAID overdoses include lethargy, drowsiness, nausea, vomiting, and epigastric pain, which are generally reversible with supportive care. Gastrointestinal bleeding can occur. Hypertension, acute renal failure, respiratory depression and coma may occur.

Patients should be managed by symptomatic and supportive care following an NSAID overdose. There are no specific antidotes. Activated charcoal (60 to 100 g in adults, 1 to 2 g/kg in children) and/or osmotic cathartic may be indicated in patients seen within 4 hours of ingestion with symptoms or following a large overdose (5 to 10 times the usual dose). Forced diuresis, alkalization of urine, hemodialysis, or hemoperfusion may not be useful due to high protein binding.

For additional information about overdose treatment, call the poison control center at 1-800-222-1222.

11. DESCRIPTION
Zipsor (diclofenac potassium) Liquid Filled Capsule is a benzenesacetic acid derivative NSAID. Zipsor is available as liquid-filled capsules of 25 mg for oral administration. The chemical name is 2-(2,6-dichlorophenyl) amino benzenesacetic acid monopotassium salt. The molecular weight is 334.24. Its molecular formula is C₂₀H₁₉Cl₂KO₃, and it has the following structural formula.

The inactive ingredients in Zipsor include ProSorb® (a proprietary combination of polyethylene glycol 400, glycerin, sorbitol, povidone, polysorbate 80, and hydrochloric acid), isopropyl alcohol, and mineral oil. The capsule shells contain gelatin, sorbitol, isopropyl alcohol, glycerin, and mineral oil. The imprinting on the gelatin capsules is black edible ink.

12. CLINICAL PHARMACOLOGY

12.1 Mechanism of Action
Zipsor is an NSAID that exhibits anti-inflammatory, analgesic, and antipyretic activities in animal models. The mechanism of action of Zipsor, like that of other NSAIDs, is not completely understood but may involve inhibition of the cyclooxygenase (COX-1 and COX-2) pathways. Diclofenac’s mechanism may also be related to prostaglandin synthetase inhibition. The analgesic mechanism of action needs further elucidation.

12.3 Pharmacokinetics
The pharmacokinetics of Zipsor was assessed in 24 healthy, normal volunteers who received 25 mg Zipsor under fasting conditions. The mean pharmacokinetic parameters for Zipsor are shown in Table 2.

<table>
<thead>
<tr>
<th>PK Parameter</th>
<th>Number of Subjects</th>
<th>Mean ± Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>T_max (hr)</td>
<td>24</td>
<td>0.47 ± 0.17</td>
</tr>
<tr>
<td>Terminal Half-life (hr)</td>
<td>24</td>
<td>1.07 ± 0.29</td>
</tr>
<tr>
<td>C_max (ng/mL)</td>
<td>24</td>
<td>1067 ± 419</td>
</tr>
<tr>
<td>AUC(0-∞) (ng·h/mL)</td>
<td>24</td>
<td>597 ± 151</td>
</tr>
</tbody>
</table>

Absorption
Diclofenac is 100% absorbed after oral administration compared to IV administration as measured by urine recovery. However, due to first-pass metabolism, only about 50% of the absorbed dose is systemically available. After repeated oral administration, no accumulation of diclofenac in plasma occurred.

The extent of diclofenac absorption is not significantly affected when Zipsor is taken concomitantly with ACE-inhibitors. The apparent volume of distribution (V/F) of diclofenac potassium is 1.3 L/kg. Diclofenac is more than 99% bound to human serum proteins, primarily to albumin. Serum protein binding is constant over the concentration range (0.15-105 µg/mL) achieved with recommended doses.

Diclofenac diffuses into and out of the synovial fluid. Diffusion into the joint occurs when plasma levels are higher than those in the synovial fluid, after which the process reverses and synovial fluid levels are higher than plasma levels. It is not known whether diffusion into the joint plays a role in the effectiveness of diclofenac.

Metabolism
Five diclofenac metabolites have been identified in human plasma and urine. The metabolites include 4'-hydroxy-, 5-hydroxy-, 3'-hydroxy-, 4',5-dihydroxy- and 3'-hydroxy-4'-methoxy diclofenac. The major diclofenac metabolite, 4'-hydroxy-diclofenac, has very
weak pharmacologic activity. The formation of 4'-hydroxy diclofenac is primarily mediated by CYP2C9. Both diclofenac and its oxidative metabolites undergo glucuronidation or sulfation followed by biliary excretion. Acetylation mediated by UGT2B7 and oxidation mediated by CYP2C8 may also play a role in diclofenac metabolism. CYP3A4 is responsible for the formation of minor metabolites, 5-hydroxy- and 3'-hydroxy-diclofenac. In patients with renal dysfunction, peak concentrations of metabolites 4'-hydroxy- and 5-hydroxy-diclofenac were approximately 50% and 4% of the parent compound after single oral dosing compared to 27% and 1% in normal healthy subjects.

Excretion: Diclofenac is eliminated through metabolism and subsequent urinary and biliary excretion of the glucuronide and the sulfate conjugates of the metabolites. Little or no free unchanged diclofenac is excreted in the urine. Approximately 65% of the dose is excreted in the urine, and approximately 35% in the bile as conjugates of unchanged diclofenac plus metabolites. Because renal elimination is not a significant pathway of elimination for unchanged diclofenac, dosing adjustment in patients with mild to moderate renal dysfunction is not necessary. The terminal half-life of unchanged diclofenac is approximately 1 hour.

Special Populations:
Pediatric: The pharmacokinetics of Zipsor has not been investigated in pediatric patients.
Race: Pharmacokinetic differences due to race have not been studied.

Hepatic Impairment: Hepatic metabolism accounts for almost 100% of diclofenac elimination, so patients with hepatic disease may require reduced doses of Zipsor compared to patients with normal hepatic function.

Renal Impairment: Diclofenac pharmacokinetics has been investigated in subjects with renal insufficiency. In patients with renal impairment (inulin clearance 60-90, 30-60, and <30 mL/min; N=6 in each group), AUC values and elimination rate were comparable to those in healthy subjects.

13. NONCLINICAL TOXICOLOGY
13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility
Carcinogenesis: Long-term carcinogenicity studies in rats given diclofenac sodium up to 2 mg/kg/day (or 12 mg/m²/day, 0.2-fold an adult human daily dose of 100 mg/day) have revealed no significant increase in tumor incidence. A 2-year carcinogenicity study conducted in mice employing diclofenac sodium at doses up to 0.3 mg/kg/day (0.9 mg/m²/day, 0.014-fold an adult human daily dose of 100 mg/day) in males and 1 mg/kg/day (3 mg/m²/day, 0.04-fold an adult human daily dose of 100 mg/day) in females did not reveal any oncogenic potential.

Mutagenesis: Diclofenac sodium did not show mutagenic activity in in vitro point mutation assays in mammalian (mouse lymphoma) and microbial (yeast, Ames) test systems and was nonmutagenic in several mammalian in vitro and in vivo tests, indicating dominant lethal and male germlinal epithelial chromosomal aberration studies in Chinese hamsters.

Impairment of Fertility: Diclofenac sodium administered to male and female rats at 4 mg/kg/day (24 mg/m²/day, 0.4-fold an adult human daily dose of 100 mg/day) did not affect fertility.

14. CLINICAL STUDIES
The efficacy of Zipsor was demonstrated in two multicenter, randomized, double-blind, placebo-controlled, parallel arm, multiple-dose clinical trials comparing Zipsor 25 mg and placebo in patients with pain following bunionectomy with osteotomy. Once patients met the criteria for randomization (pain intensity >4 on a 0-10 numerical pain rating scale) they received their initial dose of study medication followed by a remedication dose when requested by the patient, and were then dosed every six hours over four days. Pain intensity was recorded at 3 and 6 hours postdose during the fixed dosing period. In Study 1, mean baseline pain intensity scores were 6.9 in the Zipsor group (range: 4 – 10) and 7.3 in the placebo group (range: 4 – 10). In both studies, patients treated with Zipsor had a lower mean pain intensity score over the 48-hour inpatient period following the first remedication dose (see Figure 1). The median time to onset of pain relief was less than one hour for Zipsor 25 mg across the clinical trials.

The results were similar in Study 2.
What is the most important information I should know about medicines called Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)?

NSAID medicines may increase the chance of a heart attack or stroke that can lead to death. This chance increases:
- with longer use of NSAID medicines
- in people who have heart disease

NSAID medicines should never be used right before or after a heart surgery called a "coronary artery bypass graft (CABG)."

NSAID medicines can cause ulcers and bleeding in the stomach and intestines at any time during treatment. Ulcers and bleeding:
- can happen without warning symptoms
- may cause death

The chance of a person getting an ulcer or bleeding increases with:
- taking medicines called “corticosteroids” and “anticoagulants”
- longer use
- smoking
- drinking alcohol
- older age
- having poor health

NSAID medicines should only be used:
- exactly as prescribed
- at the lowest dose possible for your treatment
- for the shortest time needed

What are Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)?

NSAID medicines are used to treat pain and redness, swelling, and heat (inflammation) from medical conditions such as:
- different types of arthritis
- menstrual cramps and other types of short-term pain

Who should not take a Non-Steroidal Anti-Inflammatory Drug (NSAID)?

Do not take an NSAID medicine:
- if you had an asthma attack, hives, or other allergic reaction with aspirin or any other NSAID medicine
- for pain right before or after heart bypass surgery

Tell your healthcare provider:
- about all of your medical conditions.
- about all of the medicines you take. NSAIDs and some other medicines can interact with each other and cause serious side effects. Keep a list of your medicines to show to your healthcare provider and pharmacist.
- if you are pregnant, NSAID medicines should not be used past 30 weeks of pregnancy.
- if you are breastfeeding, talk to your doctor.

What are the possible side effects of Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)?

Serious side effects include:
- heart attack
- stroke
- high blood pressure
- heart failure from body swelling (fluid retention)
- kidney problems including kidney failure
- bleeding and ulcers in the stomach and intestine
- low red blood cells (anemia)
- life-threatening skin reactions
- life-threatening allergic reactions
- liver problems including liver failure
- asthma attacks in people who have asthma

Other side effects include:
- stomach pain
- constipation
- diarrhea
- gas
- heartburn
- nausea
- vomiting
- dizziness

Get emergency help right away if you have any of the following symptoms:
- shortness of breath or trouble breathing
- chest pain
- weakness in one part or side of your body
- slurred speech
- swelling of the face or throat

Stop your NSAID medicine and call your healthcare provider right away if you have any of the following symptoms:
- nausea
- more tired or weaker than usual
- itching
- your skin or eyes look yellow
- stomach pain
- flu-like symptoms
- vomit blood
- there is blood in your bowel movement or it is black and sticky like tar
- unusual weight gain
- skin rash or blisters with fever
- swelling of the arms and legs, hands and feet

These are not all the side effects with NSAID medicines. Talk to your healthcare provider or pharmacist for more information about NSAID medicines. Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088 or Depomed, Inc. at 1-866-458-6389.

Other information about Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)

- Aspirin is an NSAID medicine but it does not increase the chance of a heart attack. Aspirin can cause bleeding in the brain, stomach, and intestines. Aspirin can also cause ulcers in the stomach and intestines.
- Some of these NSAID medicines are sold in lower doses without a prescription (over-the-counter). Talk to your healthcare provider before using over-the-counter NSAIDs for more than 10 days.

NSAID medicines that need a prescription

<table>
<thead>
<tr>
<th>Generic Name</th>
<th>Trade Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Celecoxib</td>
<td>Celebrex</td>
</tr>
<tr>
<td>Diclofenac</td>
<td>Cataflam, Voltaren, Arthrotec (combined with misoprostol), Flector, Zipsor</td>
</tr>
<tr>
<td>Diflunisal</td>
<td>Dolobid</td>
</tr>
<tr>
<td>Etodolac</td>
<td>Lodine, Lodine XL</td>
</tr>
<tr>
<td>Fenoprofen</td>
<td>Nalfon, Nalfon 200</td>
</tr>
<tr>
<td>Flurbiprofen</td>
<td>Ansaid</td>
</tr>
<tr>
<td>Ibuprofen</td>
<td>Motrin, Tab-Profen, *Vicoprofen (combined with hydrocodone), Combunox (combined with oxycodone)</td>
</tr>
<tr>
<td>Indomethacin</td>
<td>Indocin, Indocin SR, Indo-Levoment, Indomethagan</td>
</tr>
<tr>
<td>Ketoprofen</td>
<td>Ofruvail</td>
</tr>
<tr>
<td>Ketrolac</td>
<td>Toradol</td>
</tr>
<tr>
<td>Mefenamic Acid</td>
<td>Ponstel</td>
</tr>
<tr>
<td>Meloxicam</td>
<td>Mobic</td>
</tr>
<tr>
<td>Nabumetone</td>
<td>Relafen</td>
</tr>
<tr>
<td>Naproxen</td>
<td>Naprosyn, Anaprox, Anaprox DS, EC-Naprosyn, Naprelan, Naprapac (copackaged with lanoprazole)</td>
</tr>
<tr>
<td>Oxaprozin</td>
<td>Daypro</td>
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<tr>
<td>Piroxicam</td>
<td>Feldene</td>
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<tr>
<td>Sulindac</td>
<td>Clinoril</td>
</tr>
<tr>
<td>Tolmetin</td>
<td>Tolecint, Tolecint DS, Tolecin 600</td>
</tr>
</tbody>
</table>

*Vicoprofen contains the same dose of ibuprofen as over-the-counter (OTC) NSAIDs, and is usually used for less than 10 days to treat pain. The OTC NSAID label warns that long term continuous use may increase the risk of heart attack or stroke.

This Medication Guide has been approved by the U.S. Food and Drug Administration.

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