

**DICLOFENAC SODIUM DELAYED RELEASE- diclofenac sodium tablet, delayed release**  
**NuCare Pharmaceuticals, Inc.**

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**Diclofenac Sodium**

Delayed-Release Tablets USP

Rx only

Prescribing information

**CARDIOVASCULAR RISK**

**Cardiovascular Thrombotic Events**

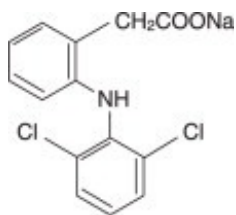
- Nonsteroidal anti-inflammatory drugs (NSAIDs) cause an increased risk of serious cardiovascular thrombotic events, including myocardial infarction and stroke, which can be fatal. This risk may occur early in treatment and may increase with duration of use [see *Warnings and Precautions*].
- Diclofenac sodium delayed-release tablets are contraindicated in the setting of coronary artery bypass graft (CABG) surgery [see *Contraindications and Warnings*].

**GASTROINTESTINAL RISK**

- NSAIDs cause an increased risk of serious gastrointestinal adverse events including inflammation, 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. [see *Warnings*].

**DESCRIPTION**

Diclofenac, as the sodium salt, is a benzene-acetic acid derivative. The chemical name is 2-[(2,6-dichlorophenyl)amino] benzeneacetic acid, monosodium salt. The molecular weight is 318.14. Its molecular formula is  $C_{14}H_{10}Cl_2NNaO_2$ , and it has the following structural formula:



Each enteric-coated tablet for oral administration contains 25 mg, 50 mg or 75 mg of diclofenac sodium. In addition, each tablet contains the following inactive ingredients; black iron oxide, hypromellose, lactose monohydrate, magnesium stearate, methacrylic acid copolymer, microcrystalline cellulose, pharmaceutical glaze, polyethylene glycol, povidone, sodium starch glycolate, talc, titanium dioxide, triethyl citrate.

**CLINICAL PHARMACOLOGY**

**Pharmacodynamics**

Diclofenac sodium delayed-release tablets is a nonsteroidal anti-inflammatory drug (NSAID) that exhibits anti-inflammatory, analgesic, and antipyretic activities in animal models. The mechanism of action of diclofenac, like that of other NSAIDs, is not completely understood but may be related to

prostaglandin synthetase inhibition.

## Pharmacokinetics

### Absorption

Diclofenac is 100% absorbed after oral administration compared to IV administration as measured by urine recovery. However, due to firstpass metabolism, only about 50% of the absorbed dose is systemically available (see Table 1). Food has no significant effect on the extent of diclofenac absorption. However, there is usually a delay in the onset of absorption of 1 to 4.5 hours and a reduction in peak plasma levels of <20%.

**Table 1. Pharmacokinetic Parameters for Diclofenac**

PK Parameter	Normal Healthy Adults (20-48 yrs.)	
	Mean	Coefficient of mean Variation (%)
Absolute Bioavailability (%) [N =7]	55	40
T <sub>max</sub> (hr) [N = 56]	2.3	69
Oral Clearance (CL/F; mL/min) [N = 56]	582	23
Renal Clearance (% unchanged drug in urine) [N = 7]	<1	—
Apparent Volume of Distribution (V/F; L/kg) [N = 56]	1.4	58
Terminal Half-life (hr) [N = 56]	2.3	48

### Distribution

The apparent volume of distribution (V/F) of diclofenac sodium is 1.4 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 to 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 CPY2C9. Both diclofenac and its oxidative metabolites undergo glucuronidation or sulfation followed by biliary excretion. Acylglucuronidation mediated by UGT2B7 and oxidation mediated by CPY2C8 may also play a role in diclofenac metabolism. CYP3A4 is responsible for the formation of minor metabolites, 5-hydroxyand 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 2 hours.

## Drug Interactions

When co-administered with voriconazole (inhibitor of CYP2C9, 2C19 and 3A4 enzyme), the C<sub>max</sub> and AUC of diclofenac increased by 114% and 78%, respectively [see *Precautions, Drug Interactions*].

## Special Populations

***Pediatric:*** The pharmacokinetics of diclofenac has not been investigated in pediatric patients.

***Race:*** Pharmacokinetic differences due to race have not been identified.

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

***Renal Insufficiency:*** Diclofenac pharmacokinetics has been investigated in subjects with renal insufficiency. No differences in the pharmacokinetics of diclofenac have been detected in studies of patients with renal impairment. In patients with renal impairment (insulin clearance 60 to 90, 30 to 60, and <30 mL/min; N=6 in each group), AUC values and elimination rate were comparable to those in healthy subjects.

## INDICATIONS AND USAGE

Carefully consider the potential benefits and risks of diclofenac sodium delayed-release tablets and other treatment options before deciding to use diclofenac. Use the lowest effective dose for the shortest duration consistent with individual patient treatment goals [see *Warnings*].

Diclofenac is indicated:

- For relief of the signs and symptoms of osteoarthritis
- For relief of the signs and symptoms of rheumatoid arthritis
- For acute or long-term use in the relief of the signs and symptoms of ankylosing spondylitis.

## CONTRAINDICATIONS

Diclofenac sodium delayed-release tablets is contraindicated in patients with known hypersensitivity to diclofenac.

Diclofenac should not be given to patients who have experienced asthma, urticaria, or other allergic-type reactions after taking aspirin or other NSAIDs. Severe, rarely fatal, anaphylactic-like reactions to NSAIDs have been reported in such patients [see *Warnings, Anaphylactic Reactions*, and *Precautions, Preexisting Asthma*].

- In the setting of coronary artery bypass graft (CABG) surgery [see *Warnings*]

## WARNINGS

### Cardiovascular Effects

## 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, including myocardial infarction (MI) and stroke, which can be fatal. Based on available data, it is unclear that the risk for CV thrombotic events is similar for all NSAIDs. The relative increase in serious CV thrombotic events over baseline conferred by NSAID use appears to be similar in those with and without known CV disease or risk factors for CV disease. However, patients with known CV disease or risk factors had a higher absolute incidence of excess serious CV thrombotic events, due to their increased baseline rate. Some observational studies found that this increased risk of serious CV thrombotic events began as early as the first weeks of treatment. The increase in CV thrombotic risk has been observed most consistently at higher doses.

To minimize the potential risk for an adverse CV event in NSAID-treated patients, use the lowest effective dose for the shortest duration possible. Physicians and patients should remain alert for the development of such events, throughout the entire treatment course, even in the absence of previous CV symptoms. Patients should be informed about the symptoms of serious CV events and the steps to take if they occur.

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 Sodium, increases the risk of serious gastrointestinal (GI) events [see *Warnings, GI Effects*].

### *Status Post Coronary Artery Bypass Graft (CABG) Surgery*

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. NSAIDs are contraindicated in the setting of CABG [see *Contraindications*].

### *Post-MI Patients*

Observational studies conducted in the Danish National Registry have demonstrated that patients treated with NSAIDs in the post-MI period were at increased risk of reinfarction, CV-related death, and all-cause mortality beginning in the first week of treatment. In this same cohort, the incidence of death in the first year post MI was 20 per 100 person years in NSAID-treated patients compared to 12 per 100 person years in non-NSAID exposed patients. Although the absolute rate of death declined somewhat after the first year post-MI, the increased relative risk of death in NSAID users persisted over at least the next four years of follow-up.

Avoid the use of diclofenac sodium delayed-release tablets in patients with a recent MI unless the benefits are expected to outweigh the risk of recurrent CV thrombotic events. If diclofenac sodium delayed-release tablets are used in patients with a recent MI, monitor patients for signs of cardiac ischemia.

## Hypertension

NSAIDs, can lead to onset of new hypertension or worsening of preexisting hypertension, either of which may contribute to the increased incidence of CV events. Patients taking thiazides or loop diuretics may have impaired response to these therapies when taking NSAIDs. NSAIDs, including diclofenac sodium delayed-release tablets, should be used with caution in patients with hypertension. Blood pressure (BP) should be monitored closely during the initiation of NSAID treatment and throughout the course of therapy.

## Heart Failure and Edema

The Coxib and traditional NSAID Trialists' Collaboration meta-analysis of randomized controlled trials demonstrated an approximately two-fold increase in hospitalizations for heart failure in COX-2

selective-treated patients and nonselective NSAID-treated patients compared to placebo-treated patients. In a Danish National Registry study of patients with heart failure, NSAID use increased the risk of MI, hospitalization for heart failure, and death.

Additionally, fluid retention and edema have been observed in some patients treated with NSAIDs. Use of Diclofenac may blunt the CV effects of several therapeutic agents used to treat these medical conditions [e.g, diuretics, ACE inhibitors, or angiotensin receptor blockers (ARBs)] [see *Drug Interactions*].

Avoid the use of diclofenac sodium delayed-release tablets in patients with severe heart failure unless the benefits are expected to outweigh the risk of worsening heart failure. If diclofenac sodium delayed-release tablets are used in patients with severe heart failure, monitor patients for signs of worsening heart failure.

### **Gastrointestinal (GI) Effects: Risk of Ulceration, Bleeding, and Perforation**

NSAIDs, including diclofenac, can cause serious gastrointestinal (GI) adverse events including inflammation, 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 to 6 months, and in about 2% to 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 therapy is not without risk.

NSAIDs should be prescribed with extreme caution in those with a prior history of ulcer disease or gastrointestinal bleeding. Patients with a *prior history of peptic ulcer disease and/or gastrointestinal 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 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, the lowest effective dose should be used for the shortest possible duration. Patients and physicians should remain alert for signs and symptoms of GI ulceration and bleeding during NSAID therapy and promptly initiate additional evaluation and treatment if a serious GI adverse event is suspected. This should include discontinuation of the NSAID until a serious GI adverse event is ruled out. For high risk patients, alternate therapies that do not involve NSAIDs should be considered.

### **Renal Effects**

Caution should be used when initiating treatment with diclofenac 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 a nonsteroidal anti-inflammatory drug 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.

### **Advanced Renal Disease**

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

### **Hepatic Effects**

Elevations of one or more liver tests may occur during therapy with diclofenac. These laboratory abnormalities may progress, may remain unchanged, or may be transient with continued therapy. Borderline elevations (i.e., less than 3 times the ULN [ULN = the upper limit of the normal range]) or greater elevations of transaminases occurred in about 15% of diclofenac-treated patients. Of the markers of hepatic function, ALT (SGPT) is recommended for the monitoring of liver injury.

In clinical trials, meaningful elevations (i.e., more than 3 times the ULN) of AST (GOT) (ALT was not measured in all studies) occurred in about 2% of approximately 5,700 patients at some time during diclofenac treatment. In a large, open-label, controlled trial of 3,700 patients treated for 2 to 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 patients and included marked elevations (i.e., more than 8 times the ULN) in about 1% of the 3,700 patients. In that open-label study, a higher incidence of borderline (less than 3 times the ULN), moderate (3 to 8 times the ULN), and marked (>8 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 therapy, but can occur at any time during treatment with diclofenac. Postmarketing surveillance has reported cases of severe hepatic reactions, including liver necrosis, jaundice, fulminant hepatitis with and without jaundice, and liver failure. Some of these reported cases resulted in fatalities or liver transplantation.

Physicians should measure transaminases periodically in patients receiving long-term therapy with diclofenac, because severe hepatotoxicity may develop without a prodrome 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. However, severe hepatic reactions 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.), diclofenac should be discontinued immediately.

To minimize the possibility that hepatic injury will become severe between transaminase measurements, physicians should inform patients of the warning signs and symptoms of hepatotoxicity (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, the lowest effective dose should be used for the shortest duration possible. Caution should be exercised in prescribing diclofenac with concomitant drugs that are known to be potentially hepatotoxic (e.g., antibiotics, anti-epileptics).

### **Anaphylactic Reactions**

As with other NSAIDs, anaphylactic reactions may occur both in patients with the aspirin triad and in

patients without known sensitivity to NSAIDs or known prior exposure to diclofenac. Diclofenac should not be given to 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* and *Precautions, Preexisting Asthma*]. Anaphylaxis-type reactions have been reported with NSAID products, including with diclofenac products, such as Diclofenac Sodium. Emergency help should be sought in cases where an anaphylactic reaction occurs.

### **Skin Reactions**

NSAIDs, including diclofenac, can cause serious skin adverse events 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 use of the drug should be discontinued at the first appearance of skin rash or any other sign of hypersensitivity.

### **Pregnancy**

In late pregnancy, as with other NSAIDs, diclofenac should be avoided because it may cause premature closure of the ductus arteriosus.

## **PRECAUTIONS**

### **General**

Diclofenac sodium delayed-release tablets cannot be expected to substitute for corticosteroids or to treat corticosteroid insufficiency. Abrupt discontinuation of corticosteroids may lead to disease exacerbation. Patients on prolonged corticosteroid therapy should have their therapy tapered slowly if a decision is made to discontinue corticosteroids.

The pharmacological activity of diclofenac in reducing fever and inflammation may diminish the utility of these diagnostic signs in detecting complications of presumed noninfectious, painful conditions.

### **Hematological Effects**

Anemia is sometimes seen in patients receiving NSAIDs, including diclofenac. This may be due to fluid retention, occult or gross GI blood loss, or an incompletely described effect upon erythropoiesis. Patients on long-term treatment with NSAIDs, including diclofenac, should have their hemoglobin or hematocrit checked if they exhibit any signs or symptoms of anemia.

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. Patients receiving diclofenac who may be adversely affected by alterations in platelet function, such as those with coagulation disorders or patients receiving anticoagulants, should be carefully monitored.

### **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 nonsteroidal anti-inflammatory drugs has been reported in such aspirin-sensitive patients, diclofenac should not be administered to patients with this form of aspirin sensitivity and should be used with caution in patients with preexisting asthma.

### **Information for Patients**

**Patients should be informed of the following information before initiating therapy with an NSAID and periodically during the course of ongoing therapy. Patients should also be encouraged to read the NSAID Medication Guide that accompanies each prescription dispensed.**

## Cardiovascular Thrombotic Events

Advise patients to be alert for the symptoms of cardiovascular thrombotic events, including chest pain, shortness of breath, weakness, or slurring of speech, and to report any of these symptoms to their health care provider immediately [see *Warnings*].

## Heart Failure And Edema

Advise patients to be alert for the symptoms of congestive heart failure including shortness of breath, unexplained weight gain, or edema and to contact their healthcare provider if such symptoms occur [see *Warnings*].

1. Diclofenac, like other NSAIDs, can cause GI discomfort and, rarely, more serious GI side effects, such as ulcers and bleeding, which may result in hospitalization and even death. Although serious GI tract ulcerations and bleeding can occur without warning symptoms, patients should be alert for the signs and symptoms of ulcerations and bleeding, and should ask for medical advice when observing any indicative sign or symptoms including epigastric pain, dyspepsia, melena, and hematemesis. Patients should be apprised of the importance of this follow-up [see *Warnings, Gastrointestinal Effects: Risk of Ulceration, Bleeding, and Perforation*].
2. Diclofenac, like other NSAIDs, can cause serious skin side effects such as exfoliative dermatitis, SJS, and TEN, which may result in hospitalizations and even death. Although serious skin reactions may occur without warning, patients should be alert for the signs and symptoms of skin rash and blisters, fever, or other signs of hypersensitivity such as itching, and should ask for medical advice when observing any indicative signs or symptoms. Patients should be advised to stop the drug immediately if they develop any type of rash and contact their physicians as soon as possible.
3. Patients should be informed of the warning signs and symptoms of hepatotoxicity (e.g., nausea, fatigue, lethargy, pruritus, jaundice, right upper quadrant tenderness, and "flu-like" symptoms). If these occur, patients should be instructed to stop therapy and seek immediate medical therapy [see *Warnings, Hepatic Effects*].
4. Patients should be informed of the signs of an anaphylactic reaction (e.g. difficulty breathing, swelling of the face or throat). If these occur, patients should be instructed to seek immediate emergency help [see *Warnings, Anaphylactic Reactions*].
5. In late pregnancy, as with other NSAIDs, diclofenac should be avoided because it will cause premature closure of the ductus arteriosus.

## Laboratory Tests

Because serious GI tract ulcerations and bleeding can occur without warning symptoms, physicians should monitor for signs or symptoms of GI bleeding. In patients on long-term treatment with NSAIDs, including diclofenac, the CBC and a chemistry profile (including transaminase levels) should be checked periodically. If clinical signs and symptoms consistent with liver or renal disease develop, systemic manifestations occur (e.g., eosinophilia, rash, etc.) or if abnormal liver tests persist or worsen, diclofenac should be discontinued.

## Drug Interactions

**Aspirin:** When diclofenac is administered with aspirin, its protein binding is reduced. The clinical significance of this interaction is not known; however, as with other NSAIDs, concomitant administration of diclofenac and aspirin is not generally recommended because of the potential of increased adverse effects.

**Methotrexate:** NSAIDs have been reported to competitively inhibit methotrexate accumulation in rabbit kidney slices. This may indicate that they could enhance the toxicity of methotrexate. Caution should be used when NSAIDs are administered concomitantly with methotrexate.

**Cyclosporine:** Diclofenac, like other NSAIDs, may affect renal prostaglandins and increase the toxicity of certain drugs. Therefore, concomitant therapy with diclofenac may increase cyclosporine's



nephrotoxicity. Caution should be used when diclofenac is administered concomitantly with cyclosporine.

**ACE Inhibitors:** Reports suggest that NSAIDs may diminish the antihypertensive effect of ACE inhibitors. This interaction should be given consideration in patients taking NSAIDs concomitantly with ACE inhibitors.

**Furosemide:** Clinical studies, as well as postmarketing observations, have shown that diclofenac 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 with NSAIDs, the patient should be observed closely for signs of renal failure [see *Warnings, Renal Effects*], as well as to assure diuretic efficacy.

**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 NSAIDs and lithium are administered concurrently, subjects should be observed carefully for signs of lithium toxicity.

**Warfarin:** The effects of warfarin and NSAIDs on GI bleeding are synergistic, such that users of both drugs together have a risk of serious GI bleeding higher than users of either drug alone.

**CYP2C9 Inhibitors or Inducers:** Diclofenac is metabolized by cytochrome P450 enzymes, predominantly by CYP2C9. Co-administration of diclofenac with CYP2C9 inhibitors (e.g. voriconazole) may enhance the exposure and toxicity of diclofenac whereas co-administration with CYP2C9 inducers (e.g. rifampin) may lead to compromised efficacy of diclofenac. Use caution when dosing diclofenac with CYP2C9 inhibitors or inducers; a dosage adjustment may be warranted [see *Clinical Pharmacology, Pharmacokinetics and Drug Interactions*].

## **Pregnancy**

**Teratogenic Effects:** Pregnancy Category C

Reproductive studies conducted in rats and rabbits have not demonstrated evidence of developmental abnormalities. However, animal reproduction studies are not always predictive of human response. There are no adequate and well-controlled studies in pregnant women.

**Nonteratogenic Effects:** Because of the known effects of nonsteroidal anti-inflammatory drugs on the fetal cardiovascular system (closure of ductus arteriosus), use during pregnancy (particularly late pregnancy) should be avoided.

## **Labor and Delivery**

In rat studies with NSAIDs, as with other drugs known to inhibit prostaglandin synthesis, an increased incidence of dystocia, delayed parturition, and decreased pup survival occurred. The effects of diclofenac on labor and delivery in pregnant women are unknown.

## **Nursing Mothers**

It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk and because of the potential for serious adverse reactions in nursing infants from diclofenac, 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.

## **Pediatric Use**

Safety and effectiveness in pediatric patients have not been established.

## **Geriatric Use**

As with any NSAIDs, caution should be exercised in treating the elderly (65 years and older).

## ADVERSE REACTIONS

In patients taking diclofenac sodium delayed-release tablets, or other NSAIDs, the most frequently reported adverse experiences occurring in approximately 1% to 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 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, hematemesis, 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, 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, fulminant hepatitis with and without jaundice, liver failure, liver necrosis, 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

## OVERDOSAGE

Symptoms following acute NSAID overdoses are usually limited to 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, but are rare. Anaphylactic reactions have been reported with therapeutic ingestion of NSAIDs, and may occur following an overdose.

Patients should be managed by symptomatic and supportive care following a NSAID overdose. There are no specific antidotes. Emesis and/or 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.

## **DOSAGE AND ADMINISTRATION**

Carefully consider the potential benefits and risks of diclofenac sodium delayed-release tablets and other treatment options before deciding to use diclofenac. Use the lowest effective dose for the shortest duration consistent with individual patient treatment goals [see *Warnings*].

After observing the response to initial therapy with diclofenac, the dose and frequency should be adjusted to suit an individual patient's needs.

For the relief of osteoarthritis, the recommended dosage is 100 to 150 mg/day in divided doses (50 mg b.i.d. or t.i.d., or 75 mg b.i.d.).

For the relief of rheumatoid arthritis, the recommended dosage is 150 to 200 mg/day in divided doses (50 mg t.i.d. or q.i.d., or 75 mg b.i.d.).

For the relief of ankylosing spondylitis, the recommended dosage is 100 to 125 mg/day, administered as 25 mg q.i.d., with an extra 25-mg dose at bedtime if necessary.

Different formulations of diclofenac (diclofenac sodium delayed-release tablets; diclofenac sodium extended-release tablets; diclofenac potassium immediate-release tablets) are not necessarily bioequivalent even if the milligram strength is the same.

## **HOW SUPPLIED**

### **Diclofenac Sodium Delayed-Release Tablets**

50 mg – white to off-white, biconvex, round-shaped, unscored (imprinted “CTI” 102 on one side), supplied in bottles of 60, 100 and 1000.

bottles of 20 NDC 68071-3184-2

bottles of 21 NDC 68071-3184-1

bottles of 30 NDC 68071-3184-3

bottles of 45 NDC 68071-3184-5

bottles of 60 NDC 68071-3184-6

bottles of 90 NDC 68071-3184-9

Store at 20° to 25°C (68° to 77°F) (See USP Controlled Room Temperature). Protect from moisture.

Dispense in a tight, light-resistant container as defined in the USP.

### **Manufactured and Distributed by:**

Carlsbad Technology, Inc.

Carlsbad, CA 92008 USA

## **Medication Guide for Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)**

**What is the most important information I should know about medicines called Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)?**

**NSAIDs can cause serious side effects, including:**

- **Increased risk of heart attack or stroke that can lead to death. This risk may happen early in treatment and may increase:**

- with increasing doses of NSAIDs
- with longer use of NSAIDs

**Do not take NSAIDs right before or after a heart surgery called a “coronary artery bypass graft (CABG).” Avoid taking NSAIDs after a recent heart attack, unless your healthcare provider tells you to. You may have an increased risk of another heart attack if you take NSAIDs after a recent heart attack.**

- **Increased risk of bleeding, ulcers, and tears (perforation) of the esophagus (tube leading from the mouth to the stomach), stomach and intestines:**

- anytime during use
- without warning symptoms
- that may cause death

**The risk of getting an ulcer or bleeding increases with:**

- past history of stomach ulcers, or intestinal bleeding with use of NSAIDs
- taking medicines called “corticosteroids”, “anticoagulants”, “SSRIs” or “SNRIs”

- |                              |                          |
|------------------------------|--------------------------|
| • increasing doses of NSAIDs | • older age              |
| • longer use of NSAIDs       | • poor health            |
| • smoking                    | • advanced liver disease |
| • drinking alcohol           | • bleeding problems      |

**NSAIDs should only be used:**

- **exactly as prescribed**
- **at the lowest dose possible for your treatment**
- **for the shortest time needed**

**What are NSAIDs?**

NSAIDs 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 NSAIDs?**

**Do not take NSAIDs:**

- if you have had an asthma attack, hives, or other allergic reaction with aspirin or any other NSAIDs.
- right before or after heart bypass surgery.

**Before taking NSAIDs, tell your healthcare provider about all of your medical conditions, including if you:**

- have liver or kidney problems
- have high blood pressure
- have asthma
- are pregnant or plan to become pregnant. Talk to your healthcare provider if you are considering

taking NSAIDs during pregnancy. **You should not take NSAIDs after 29 weeks of pregnancy.**

- are breastfeeding or plan to breast feed.

**Tell your healthcare provider about all of the medicines you take, including prescription or over-the-counter medicines, vitamins, or herbal supplements.** NSAIDs and some other medicines can interact with each other and cause serious side effects. **Do not start taking any new medicine without taking to your healthcare provider first.**

**What are the possible side effects of NSAIDs?**

**NSAIDs can cause serious side effects, including:**

**See “ What is the most important information I should know about medicines called Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)?**

- new or worse high blood pressure
- heart failure
- liver problems including liver failure
- kidney problems including kidney failure
- low red blood cells (anemia)
- life-threatening skin reactions
- life-threatening allergic reactions
- **Other side effects of NSAIDs include:** stomach pain, constipation, diarrhea, gas, heartburn, nausea, vomiting, and dizziness.

**Get emergency help right away if you get 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 taking your NSAID and call your healthcare provider right away if you get any of the following symptoms:**

- nausea
- more tired or weaker than usual
- diarrhea
- itching
- your skin or eyes look yellow
- indigestion or 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, legs, hands and feet

**If you take too much of your NSAID, call your healthcare provider or get medical help right away.**

These are not all the possible side effects of NSAIDs. For more information, ask your healthcare provider or pharmacist about NSAIDs.

Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

**Other information about NSAIDs**

- Aspirin is an NSAID 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 NSAIDs 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.

**General information about the safe and effective use of NSAIDs**

Medicines are sometimes prescribed for purposes other than those listed in a Medication Guide. Do not use NSAIDs for a condition for which it was not prescribed. Do not give NSAIDs to other people,

If you would like more information about NSAIDs, talk with your healthcare provider. You can ask your pharmacist or healthcare provider for information about NSAIDs that is written for health professionals.

**Distributed by: Carlsbad Technology, Inc. 5923 Balfour Court., Carlsbad, CA 92008 USA**

This Medication Guide has been approved by the U.S. Food and Drug Administration CTI-1 MG Rev. E 07/15

NuCare Pharmaceuticals, Inc.

Diclofenac Sodium 50mg

#60 D-R Tablets

Product #: P0358060  
**Rx Only**

Each Delayed-Release tablet contains.  
Diclofenac Sodium USP, 50mg

Round-Shaped White/Off-White Tablet  
Imprinted: "CTI 102" on one side

Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

GTIN 00368071318463  
Serial# 00000000002  
Exp. Date 00-00  
LOT#: 000000

Manufactured by  
Carlsbad Technology, Inc. Carlsbad,  
CA 92008

Packaged By:  
NuCare Pharmaceuticals, Inc.,  
Orange, CA 92687

Patent Instructions:

Take \_\_\_\_\_ every \_\_\_\_\_ hours  
\_\_\_\_\_ times a day.

Rev 01/01/19

WARNING: KEEP OUT OF REACH OF CHILDREN

NDC: 68071-3184-6

Lot: 000000 NDC: 68071-3184-06  
MFR NDC: 61442-102-10 Exp.: 00-00  
Serial# 00000000002

Diclofenac Sodium 50mg

Lot: 000000 NDC: 68071-3184-06  
MFR NDC: 61442-102-10 Exp.: 00-00  
Serial# 00000000002

## diclofenac sodium tablet, delayed release

<b>Product Type</b>	HUMAN PRESCRIPTION DRUG	<b>Item Code (Source)</b>	NDC:68071-3184(NDC:61442-102)
<b>Route of Administration</b>	ORAL		

Ingredient Name	Basis of Strength	Strength
<b>DICLOFENAC SODIUM</b> (UNII: QTG126297Q) (DICLOFENAC - UNII:144O8QL0L1)	DICLOFENAC SODIUM	50 mg

Ingredient Name	Strength
FERROSO FERRIC OXIDE (UNII: XM0M87F357)	
HYPROMELLOSES (UNII: 3NXW29V3WO)	
LACTOSE MONOHYDRATE (UNII: EWQ57Q8I5X)	
MAGNESIUM STEARATE (UNII: 70097M6I30)	
METHACRYLIC ACID - METHYL METHACRYLATE COPOLYMER (1:1) (UNII: 74G4R6TH13)	
CELLULOSE, MICROCRYSTALLINE (UNII: OP1R32D61U)	
SHELLAC (UNII: 46N107B71O)	
POLYETHYLENE GLYCOL 2000 (UNII: HAF0412YIT)	

<b>POVIDONE</b> (UNII: FZ989 GH94E)				
<b>SODIUM STARCH GLYCOLATE TYPE A POTATO</b> (UNII: 5856J3G2A2)				
<b>TALC</b> (UNII: 7SEV7J4R1U)				
<b>TITANIUM DIOXIDE</b> (UNII: 15FIX9V2JP)				
<b>Product Characteristics</b>				
<b>Color</b>	white (White)	<b>Score</b>	no score	
<b>Shape</b>	ROUND (Round)	<b>Size</b>	9mm	
<b>Flavor</b>		<b>Imprint Code</b>	CTI;102	
<b>Contains</b>				
<b>Packaging</b>				
<b>#</b>	<b>Item Code</b>	<b>Package Description</b>	<b>Marketing Start Date</b>	<b>Marketing End Date</b>
1	NDC:68071-3184-2	20 in 1 BOTTLE; Type 0: Not a Combination Product	03/21/2017	
2	NDC:68071-3184-1	21 in 1 BOTTLE; Type 0: Not a Combination Product	03/21/2017	
3	NDC:68071-3184-3	30 in 1 BOTTLE; Type 0: Not a Combination Product	03/21/2017	
4	NDC:68071-3184-5	45 in 1 BOTTLE; Type 0: Not a Combination Product	03/21/2017	
5	NDC:68071-3184-6	60 in 1 BOTTLE; Type 0: Not a Combination Product	03/21/2017	
6	NDC:68071-3184-9	90 in 1 BOTTLE; Type 0: Not a Combination Product	03/21/2017	
<b>Marketing Information</b>				
<b>Marketing Category</b>	<b>Application Number or Monograph Citation</b>	<b>Marketing Start Date</b>	<b>Marketing End Date</b>	
ANDA	ANDA075185	11/13/1998		

**Labeler** - NuCare Pharmaceuticals, Inc. (010632300)

Establishment			
Name	Address	ID/FEI	Business Operations
NuCare Pharmaceuticals, Inc.		010632300	repack(68071-3184)