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2 **EC-NAPROSYN[®] (naproxen delayed-release tablets)**

3 **NAPROSYN[®] (naproxen tablets)**

4 **ANAPROX[®]/ANAPROX[®]DS (naproxen sodium tablets)**

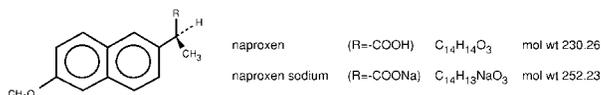
5 **NAPROSYN[®] (naproxen suspension)**

6 **R_x only**

7 **DESCRIPTION**

8 Naproxen is a member of the arylacetic acid group of nonsteroidal anti-
9 inflammatory drugs.

10 The chemical names for naproxen and naproxen sodium are (S)-6-methoxy- α -
11 methyl-2-naphthaleneacetic acid and (S)-6-methoxy- α -methyl-2-
12 naphthaleneacetic acid, sodium salt, respectively. Naproxen and naproxen
13 sodium have the following structures, respectively:



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15 Naproxen has a molecular weight of 230.26 and a molecular formula of
16 C₁₄H₁₄O₃. Naproxen sodium has a molecular weight of 252.23 and a
17 molecular formula of C₁₄H₁₃NaO₃.

18 Naproxen is an odorless, white to off-white crystalline substance. It is lipid-
19 soluble, practically insoluble in water at low pH and freely soluble in water at
20 high pH. The octanol/water partition coefficient of naproxen at pH 7.4 is 1.6
21 to 1.8. Naproxen sodium is a white to creamy white, crystalline solid, freely
22 soluble in water at neutral pH.

23 NAPROSYN (naproxen tablets) is available as yellow tablets containing 250
24 mg of naproxen, peach tablets containing 375 mg of naproxen and yellow
25 tablets containing 500 mg of naproxen for oral administration. The inactive
26 ingredients are croscarmellose sodium, iron oxides, povidone and magnesium
27 stearate.

28 EC-NAPROSYN (naproxen delayed-release tablets) is available as enteric-
29 coated white tablets containing 375 mg of naproxen and 500 mg of naproxen
30 for oral administration. The inactive ingredients are croscarmellose sodium,
31 povidone and magnesium stearate. The enteric coating dispersion contains
32 methacrylic acid copolymer, talc, triethyl citrate, sodium hydroxide and
33 purified water. The dispersion may also contain simethicone emulsion. The
34 dissolution of this enteric-coated naproxen tablet is pH dependent with rapid
35 dissolution above pH 6. There is no dissolution below pH 4.

36 ANAPROX (naproxen sodium tablets) is available as blue tablets containing
37 275 mg of naproxen sodium and ANAPROX DS (naproxen sodium tablets) is

EC-NAPROSYN® (naproxen delayed-release tablets), NAPROSYN® (naproxen tablets), ANAPROX®/ANAPROX® DS (naproxen sodium tablets), NAPROSYN® (naproxen suspension)

38 available as dark blue tablets containing 550 mg of naproxen sodium for oral
39 administration. The inactive ingredients are magnesium stearate,
40 microcrystalline cellulose, povidone and talc. The coating suspension for the
41 ANAPROX 275 mg tablet may contain hydroxypropyl methylcellulose 2910,
42 Opaspray K-1-4210A, polyethylene glycol 8000 or Opadry YS-1-4215. The
43 coating suspension for the ANAPROX DS 550 mg tablet may contain
44 hydroxypropyl methylcellulose 2910, Opaspray K-1-4227, polyethylene
45 glycol 8000 or Opadry YS-1-4216.

46 NAPROSYN (naproxen suspension) is available as a light orange-colored
47 opaque oral suspension containing 125 mg/5 mL of naproxen in a vehicle
48 containing sucrose, magnesium aluminum silicate, sorbitol solution and
49 sodium chloride (30 mg/5 mL, 1.5 mEq), methylparaben, fumaric acid, FD&C
50 Yellow No. 6, imitation pineapple flavor, imitation orange flavor and purified
51 water. The pH of the suspension ranges from 2.2 to 3.7.

52 **CLINICAL PHARMACOLOGY**

53 **Pharmacodynamics:** Naproxen is a nonsteroidal anti-inflammatory drug
54 (NSAID) with analgesic and antipyretic properties. The sodium salt of
55 naproxen has been developed as a more rapidly absorbed formulation of
56 naproxen for use as an analgesic. The mechanism of action of the naproxen
57 anion, like that of other NSAIDs, is not completely understood but may be
58 related to prostaglandin synthetase inhibition.

59 **Pharmacokinetics:** Naproxen itself is rapidly and completely absorbed
60 from the gastrointestinal tract with an in vivo bioavailability of 95%. The
61 different dosage forms of NAPROSYN are bioequivalent in terms of extent of
62 absorption (AUC) and peak concentration (C_{max}); however, the products do
63 differ in their pattern of absorption. These differences between naproxen
64 products are related to both the chemical form of naproxen used and its
65 formulation. Even with the observed differences in pattern of absorption, the
66 elimination half-life of naproxen is unchanged across products ranging from
67 12 to 17 hours. Steady-state levels of naproxen are reached in 4 to 5 days, and
68 the degree of naproxen accumulation is consistent with this half-life. This
69 suggests that the differences in pattern of release play only a negligible role in
70 the attainment of steady-state plasma levels.

71 **Absorption:**

72 **Immediate Release:** After administration of NAPROSYN tablets, peak
73 plasma levels are attained in 2 to 4 hours. After oral administration of
74 ANAPROX, peak plasma levels are attained in 1 to 2 hours. The difference in
75 rates between the two products is due to the increased aqueous solubility of
76 the sodium salt of naproxen used in ANAPROX. Peak plasma levels of
77 naproxen given as NAPROSYN Suspension are attained in 1 to 4 hours.

EC-NAPROSYN® (naproxen delayed-release tablets), NAPROSYN® (naproxen tablets), ANAPROX®/ANAPROX® DS (naproxen sodium tablets), NAPROSYN® (naproxen suspension)

78 **Delayed Release:** EC-NAPROSYN is designed with a pH-sensitive coating
 79 to provide a barrier to disintegration in the acidic environment of the stomach
 80 and to lose integrity in the more neutral environment of the small intestine.
 81 The enteric polymer coating selected for EC-NAPROSYN dissolves above pH
 82 6. When EC-NAPROSYN was given to fasted subjects, peak plasma levels
 83 were attained about 4 to 6 hours following the first dose (range: 2 to 12
 84 hours). An in vivo study in man using radiolabeled EC-NAPROSYN tablets
 85 demonstrated that EC-NAPROSYN dissolves primarily in the small intestine
 86 rather than the stomach, so the absorption of the drug is delayed until the
 87 stomach is emptied.

88 When EC-NAPROSYN and NAPROSYN were given to fasted subjects
 89 (n=24) in a crossover study following 1 week of dosing, differences in time to
 90 peak plasma levels (T_{max}) were observed, but there were no differences in
 91 total absorption as measured by C_{max} and AUC:

	EC-NAPROSYN* 500 mg bid	NAPROSYN* 500 mg bid
C_{max} (µg/mL)	94.9 (18%)	97.4 (13%)
T_{max} (hours)	4 (39%)	1.9 (61%)
AUC _{0-12 hr} (µg·hr/mL)	845 (20%)	767 (15%)

92 *Mean value (coefficient of variation)

93 **Antacid Effects:** When EC-NAPROSYN was given as a single dose with
 94 antacid (54 mEq buffering capacity), the peak plasma levels of naproxen were
 95 unchanged, but the time to peak was reduced (mean T_{max} fasted 5.6 hours,
 96 mean T_{max} with antacid 5 hours), although not significantly.

97 **Food Effects:** When EC-NAPROSYN was given as a single dose with food,
 98 peak plasma levels in most subjects were achieved in about 12 hours (range: 4
 99 to 24 hours). Residence time in the small intestine until disintegration was
 100 independent of food intake. The presence of food prolonged the time the
 101 tablets remained in the stomach, time to first detectable serum naproxen
 102 levels, and time to maximal naproxen levels (T_{max}), but did not affect peak
 103 naproxen levels (C_{max}).

104 **Distribution:**

105 Naproxen has a volume of distribution of 0.16 L/kg. At therapeutic levels
 106 naproxen is greater than 99% albumin-bound. At doses of naproxen greater
 107 than 500 mg/day there is less than proportional increase in plasma levels due
 108 to an increase in clearance caused by saturation of plasma protein binding at
 109 higher doses (average trough C_{ss} 36.5, 49.2 and 56.4 mg/L with 500, 1000 and
 110 1500 mg daily doses of naproxen). The naproxen anion has been found in the
 111 milk of lactating women at a concentration equivalent to approximately 1% of

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112 maximum naproxen concentration in plasma (see PRECAUTIONS: *Nursing*
113 *Mothers*).

114 **Metabolism:**

115 Naproxen is extensively metabolized to 6-0-desmethyl naproxen, and both
116 parent and metabolites do not induce metabolizing enzymes.

117 **Excretion:**

118 The clearance of naproxen is 0.13 mL/min/kg. Approximately 95% of the
119 naproxen from any dose is excreted in the urine, primarily as naproxen (less
120 than 1%), 6-0-desmethyl naproxen (less than 1%) or their conjugates (66% to
121 92%). The plasma half-life of the naproxen anion in humans ranges from 12
122 to 17 hours. The corresponding half-lives of both naproxen's metabolites and
123 conjugates are shorter than 12 hours, and their rates of excretion have been
124 found to coincide closely with the rate of naproxen disappearance from the
125 plasma. In patients with renal failure metabolites may accumulate (see
126 PRECAUTIONS: *Renal Effects*).

127 **Special Populations:**

128 ***Pediatric Patients:*** In pediatric patients aged 5 to 16 years with arthritis,
129 plasma naproxen levels following a 5 mg/kg single dose of naproxen
130 suspension (see DOSAGE AND ADMINISTRATION) were found to be
131 similar to those found in normal adults following a 500 mg dose. The terminal
132 half-life appears to be similar in pediatric and adult patients. Pharmacokinetic
133 studies of naproxen were not performed in pediatric patients younger than 5
134 years of age. Pharmacokinetic parameters appear to be similar following
135 administration of naproxen suspension or tablets in pediatric patients. EC-
136 NAPROSYN has not been studied in subjects under the age of 18.

137 ***Geriatric Patients:*** Studies indicate that although total plasma concentration
138 of naproxen is unchanged, the unbound plasma fraction of naproxen is
139 increased in the elderly, although the unbound fraction is less than 1% of the
140 total naproxen concentration. Unbound trough naproxen concentrations in
141 elderly subjects have been reported to range from 0.12% to 0.19% of total
142 naproxen concentration, compared with 0.05% to 0.075% in younger subjects.
143 The clinical significance of this finding is unclear, although it is possible that
144 the increase in free naproxen concentration could be associated with an
145 increase in the rate of adverse events per a given dosage in some elderly
146 patients.

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

148 ***Hepatic Insufficiency:*** Naproxen pharmacokinetics has not been determined
149 in subjects with hepatic insufficiency.

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150 **Renal Insufficiency:** Naproxen pharmacokinetics has not been determined in
151 subjects with renal insufficiency. Given that naproxen, its metabolites and
152 conjugates are primarily excreted by the kidney, the potential exists for
153 naproxen metabolites to accumulate in the presence of renal insufficiency.
154 Elimination of naproxen is decreased in patients with severe renal impairment.
155 Naproxen-containing products are not recommended for use in patients with
156 moderate to severe and severe renal impairment (creatinine clearance < 30
157 mL/min) (see PRECAUTIONS: *Renal Effects*).

158 **CLINICAL STUDIES**

159 **General Information:** Naproxen has been studied in patients with
160 rheumatoid arthritis, osteoarthritis, juvenile arthritis, ankylosing spondylitis,
161 tendonitis and bursitis, and acute gout. Improvement in patients treated for
162 rheumatoid arthritis was demonstrated by a reduction in joint swelling, a
163 reduction in duration of morning stiffness, a reduction in disease activity as
164 assessed by both the investigator and patient, and by increased mobility as
165 demonstrated by a reduction in walking time. Generally, response to naproxen
166 has not been found to be dependent on age, sex, severity or duration of
167 rheumatoid arthritis.

168 In patients with osteoarthritis, the therapeutic action of naproxen has been
169 shown by a reduction in joint pain or tenderness, an increase in range of
170 motion in knee joints, increased mobility as demonstrated by a reduction in
171 walking time, and improvement in capacity to perform activities of daily
172 living impaired by the disease.

173 In a clinical trial comparing standard formulations of naproxen 375 mg bid
174 (750 mg a day) vs 750 mg bid (1500 mg/day), 9 patients in the 750 mg group
175 terminated prematurely because of adverse events. Nineteen patients in the
176 1500 mg group terminated prematurely because of adverse events. Most of
177 these adverse events were gastrointestinal events.

178 In clinical studies in patients with rheumatoid arthritis, osteoarthritis, and
179 juvenile arthritis, naproxen has been shown to be comparable to aspirin and
180 indomethacin in controlling the aforementioned measures of disease activity,
181 but the frequency and severity of the milder gastrointestinal adverse effects
182 (nausea, dyspepsia, heartburn) and nervous system adverse effects (tinnitus,
183 dizziness, lightheadedness) were less in naproxen-treated patients than in
184 those treated with aspirin or indomethacin.

185 In patients with ankylosing spondylitis, naproxen has been shown to decrease
186 night pain, morning stiffness and pain at rest. In double-blind studies the drug
187 was shown to be as effective as aspirin, but with fewer side effects.

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188 In patients with acute gout, a favorable response to naproxen was shown by
189 significant clearing of inflammatory changes (eg, decrease in swelling, heat)
190 within 24 to 48 hours, as well as by relief of pain and tenderness.

191 Naproxen has been studied in patients with mild to moderate pain secondary
192 to postoperative, orthopedic, postpartum episiotomy and uterine contraction
193 pain and dysmenorrhea. Onset of pain relief can begin within 1 hour in
194 patients taking naproxen and within 30 minutes in patients taking naproxen
195 sodium. Analgesic effect was shown by such measures as reduction of pain
196 intensity scores, increase in pain relief scores, decrease in numbers of patients
197 requiring additional analgesic medication, and delay in time to remedication.
198 The analgesic effect has been found to last for up to 12 hours.

199 Naproxen may be used safely in combination with gold salts and/or
200 corticosteroids; however, in controlled clinical trials, when added to the
201 regimen of patients receiving corticosteroids, it did not appear to cause greater
202 improvement over that seen with corticosteroids alone. Whether naproxen has
203 a “steroid-sparing” effect has not been adequately studied. When added to the
204 regimen of patients receiving gold salts, naproxen did result in greater
205 improvement. Its use in combination with salicylates is not recommended
206 because there is evidence that aspirin increases the rate of excretion of
207 naproxen and data are inadequate to demonstrate that naproxen and aspirin
208 produce greater improvement over that achieved with aspirin alone. In
209 addition, as with other NSAIDs, the combination may result in higher
210 frequency of adverse events than demonstrated for either product alone.

211 In ⁵¹Cr blood loss and gastroscopy studies with normal volunteers, daily
212 administration of 1000 mg of naproxen as 1000 mg of NAPROSYN
213 (naproxen) or 1100 mg of ANAPROX (naproxen sodium) has been
214 demonstrated to cause statistically significantly less gastric bleeding and
215 erosion than 3250 mg of aspirin.

216 Three 6-week, double-blind, multicenter studies with EC-NAPROSYN
217 (naproxen) (375 or 500 mg bid, n=385) and NAPROSYN (375 or 500 mg bid,
218 n=279) were conducted comparing EC-NAPROSYN with NAPROSYN,
219 including 355 rheumatoid arthritis and osteoarthritis patients who had a recent
220 history of NSAID-related GI symptoms. These studies indicated that EC-
221 NAPROSYN and NAPROSYN showed no significant differences in efficacy
222 or safety and had similar prevalence of minor GI complaints. Individual
223 patients, however, may find one formulation preferable to the other.

224 Five hundred and fifty-three patients received EC-NAPROSYN during long-
225 term open-label trials (mean length of treatment was 159 days). The rates for
226 clinically-diagnosed peptic ulcers and GI bleeds were similar to what has been
227 historically reported for long-term NSAID use.

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228 **Geriatric Patients:** The hepatic and renal tolerability of long-term naproxen
229 administration was studied in two double blind clinical trials involving 586
230 patients. Of the patients studied, 98 patients were age 65 and older and 10 of
231 the 98 patients were age 75 and older. Naproxen was administered at doses of
232 375 mg twice daily or 750 mg twice daily for up to 6 months. Transient
233 abnormalities of laboratory tests assessing hepatic and renal function were
234 noted in some patients, although there were no differences noted in the
235 occurrence of abnormal values among different age groups.

236 **INDIVIDUALIZATION OF DOSAGE**

237 Although NAPROSYN, NAPROSYN Suspension, EC-NAPROSYN,
238 ANAPROX and ANAPROX DS all circulate in the plasma as naproxen, they
239 have pharmacokinetic differences that may affect onset of action. Onset of
240 pain relief can begin within 30 minutes in patients taking naproxen sodium
241 and within 1 hour in patients taking naproxen. Because EC-NAPROSYN
242 dissolves in the small intestine rather than in the stomach, the absorption of
243 the drug is delayed compared to the other naproxen formulations (see
244 CLINICAL PHARMACOLOGY).

245 The recommended strategy for initiating therapy is to choose a formulation
246 and a starting dose likely to be effective for the patient and then adjust the
247 dosage based on observation of benefit and/or adverse events. A lower dose
248 should be considered in patients with renal or hepatic impairment or in elderly
249 patients (see PRECAUTIONS).

250 **Analgesia/Dysmenorrhea/Bursitis and Tendinitis:** Because the
251 sodium salt of naproxen is more rapidly absorbed, ANAPROX/ANAPROX
252 DS is recommended for the management of acute painful conditions when
253 prompt onset of pain relief is desired. The recommended starting dose is 550
254 mg followed by 550 mg every 12 hours or 275 mg every 6 to 8 hours, as
255 required. The initial total daily dose should not exceed 1375 mg of naproxen
256 sodium. Thereafter, the total daily dose should not exceed 1100 mg of
257 naproxen sodium. NAPROSYN may also be used for treatment of acute pain
258 and dysmenorrhea. EC-NAPROSYN is not recommended for initial treatment
259 of acute pain because absorption of naproxen is delayed compared to other
260 naproxen-containing products (see CLINICAL PHARMACOLOGY and
261 INDICATIONS AND USAGE).

262 **Acute Gout:** The recommended starting dose is 750 mg of NAPROSYN
263 followed by 250 mg every 8 hours until the attack has subsided. ANAPROX
264 may also be used at a starting dose of 825 mg followed by 275 mg every 8
265 hours as needed. EC-NAPROSYN is not recommended because of the delay
266 in absorption (see CLINICAL PHARMACOLOGY).

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267 ***Osteoarthritis/Rheumatoid Arthritis/Ankylosing Spondylitis:*** The
268 recommended dose of naproxen is NAPROSYN or NAPROSYN Suspension
269 250 mg, 375 mg or 500 mg taken twice daily (morning and evening) or EC-
270 NAPROSYN 375 mg or 500 mg taken twice daily. Naproxen sodium may
271 also be used (see DOSAGE AND ADMINISTRATION).

272 During long-term administration the dose of naproxen may be adjusted up or
273 down depending on the clinical response of the patient. A lower daily dose
274 may suffice for long-term administration. In patients who tolerate lower doses
275 well, the dose may be increased to 1500 mg per day for up to 6 months when
276 a higher level of anti-inflammatory/analgesic activity is required. When
277 treating patients with naproxen 1500 mg/day (as NAPROSYN or 1650 mg of
278 ANAPROX), the physician should observe sufficient increased clinical
279 benefit to offset the potential increased risk. The morning and evening doses
280 do not have to be equal in size and administration of the drug more frequently
281 than twice daily does not generally make a difference in response (see
282 CLINICAL PHARMACOLOGY).

283 ***Juvenile Arthritis:*** The use of NAPROSYN Suspension allows for more
284 flexible dose titration. In pediatric patients, doses of 5 mg/kg/day produced
285 plasma levels of naproxen similar to those seen in adults taking 500 mg of
286 naproxen (see CLINICAL PHARMACOLOGY).

287 The recommended total daily dose is approximately 10 mg/kg given in two
288 divided doses (ie, 5 mg/kg given twice a day) (see DOSAGE AND
289 ADMINISTRATION).

290 **INDICATIONS AND USAGE**

291 Naproxen as NAPROSYN, EC-NAPROSYN, ANAPROX, ANAPROX DS or
292 NAPROSYN Suspension is indicated:

- 293 • For the relief of the signs and symptoms of rheumatoid arthritis
- 294 • For the relief of the signs and symptoms of osteoarthritis
- 295 • For the relief of the signs and symptoms of ankylosing spondylitis
- 296 • For the relief of the signs and symptoms of juvenile arthritis

297 Naproxen as NAPROSYN Suspension is recommended for juvenile
298 rheumatoid arthritis in order to obtain the maximum dosage flexibility based
299 on the patient's weight.

300 Naproxen as NAPROSYN, ANAPROX, ANAPROX DS and NAPROSYN
301 Suspension is also indicated:

- 302 • For relief of the signs and symptoms of tendinitis

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- 303 • For relief of the signs and symptoms of bursitis
- 304 • For relief of the signs and symptoms of acute gout
- 305 • For the management of pain
- 306 • For the management of primary dysmenorrhea

307 EC-NAPROSYN is not recommended for initial treatment of acute pain
308 because the absorption of naproxen is delayed compared to absorption from
309 other naproxen-containing products (see CLINICAL PHARMACOLOGY and
310 DOSAGE AND ADMINISTRATION).

311 **CONTRAINDICATIONS**

312 All naproxen products are contraindicated in patients who have had allergic
313 reactions to prescription as well as to over-the-counter products containing
314 naproxen. It is also contraindicated in patients in whom aspirin or other
315 nonsteroidal anti-inflammatory/analgesic drugs induce the syndrome of
316 asthma, rhinitis, and nasal polyps. Both types of reactions have the potential
317 of being fatal. Anaphylactoid reactions to naproxen, whether of the true
318 allergic type or the pharmacologic idiosyncratic (eg, aspirin hypersensitivity
319 syndrome) type, usually but not always occur in patients with a known history
320 of such reactions. Therefore, careful questioning of patients for such things as
321 asthma, nasal polyps, urticaria, and hypotension associated with nonsteroidal
322 anti-inflammatory drugs before starting therapy is important. In addition, if
323 such symptoms occur during therapy, treatment should be discontinued (see
324 WARNINGS: *Anaphylactoid Reactions* and PRECAUTIONS: *Preexisting*
325 *Asthma*).

326 **WARNINGS**

327 ***Gastrointestinal (GI) Effects – Risk of GI Ulceration, Bleeding, and***
328 ***Perforation:*** Serious gastrointestinal toxicity such as bleeding, ulceration
329 and perforation of the stomach, small intestine or large intestine, can occur at
330 any time, with or without warning symptoms, in patients treated with
331 nonsteroidal anti-inflammatory drugs (NSAIDs). Minor upper gastrointestinal
332 problems, such as dyspepsia, are common and may also occur at any time
333 during NSAID therapy. Therefore, physicians and patients should remain alert
334 for ulceration and bleeding, even in the absence of previous GI tract
335 symptoms (see PRECAUTIONS: *Hematological Effects*). Patients should be
336 informed about the signs and/or symptoms of serious GI toxicity and the steps
337 to take if they occur. The utility of periodic laboratory monitoring has not
338 been demonstrated, nor has it been adequately assessed. Only 1 in 5 patients
339 who develop a serious upper GI adverse event on NSAID therapy is
340 symptomatic. It has been demonstrated that upper GI ulcers, gross bleeding or
341 perforation, caused by NSAIDs, appear to occur in approximately 1% of

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342 patients treated for 3 to 6 months and in about 2% to 4% of patients treated for
343 1 year. These trends continue, thus increasing the likelihood of developing a
344 serious GI event at some time during the course of therapy. However, even
345 short-term therapy is not without risk.

346 NSAIDs should be prescribed with extreme caution in patients with a prior
347 history of ulcer disease or gastrointestinal bleeding. Most spontaneous reports
348 of fatal GI events are in elderly or debilitated patients and therefore special
349 care should be taken in treating this population. **To minimize the potential
350 risk for an adverse GI event, the lowest effective dose should be used for
351 the shortest possible duration.** For high-risk patients, alternate therapies that
352 do not involve NSAIDs should be considered.

353 Studies have shown that patients with a *prior history of peptic ulcer disease*
354 *and/or gastrointestinal bleeding* and who use NSAIDs, have a greater than
355 10-fold risk for developing a GI bleed than patients with neither of these risk
356 factors. In addition to a past history of ulcer disease,
357 pharmacoepidemiological studies have identified several other co-therapies or
358 co-morbid conditions that may increase the risk for GI bleeding such as:
359 treatment with oral corticosteroids, treatment with anticoagulants, longer
360 duration of NSAID therapy, smoking, alcoholism, older age, and poor general
361 health status.

362 **Anaphylactoid Reactions:** As with other NSAIDs, anaphylactoid
363 reactions may occur in patients without known prior exposure to naproxen.
364 Naproxen should not be given to patients with the aspirin triad. This symptom
365 complex typically occurs in asthmatic patients who experience rhinitis with or
366 without nasal polyps, or who exhibit severe, potentially fatal bronchospasm
367 after taking aspirin or other NSAIDs (see CONTRAINDICATIONS and
368 PRECAUTIONS: *Preexisting Asthma*). Emergency help should be sought in
369 cases where an anaphylactoid reaction occurs.

370 **Advanced Renal Disease:** In cases with advanced kidney disease,
371 treatment with naproxen is not recommended. If NSAID therapy, however,
372 must be initiated, close monitoring of the patient's kidney function is
373 advisable (see PRECAUTIONS: *Renal Effects*).

374 **Pregnancy:** In late pregnancy, as with other NSAIDs, naproxen should be
375 avoided because it may cause premature closure of the ductus arteriosus.

376 **PRECAUTIONS**

377 **General:** NAPROXEN-CONTAINING PRODUCTS SUCH AS
378 NAPROSYN, EC-NAPROSYN, ANAPROX, ANAPROX DS,
379 NAPROSYN SUSPENSION, ALEVE®*, AND OTHER NAPROXEN
380 PRODUCTS SHOULD NOT BE USED CONCOMITANTLY SINCE

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381 **THEY ALL CIRCULATE IN THE PLASMA AS THE NAPROXEN**
382 **ANION.**

383 Naproxen cannot be expected to substitute for corticosteroids or to treat
384 corticosteroid insufficiency. Abrupt discontinuation of corticosteroids may
385 lead to disease exacerbation. Patients on prolonged corticosteroid therapy
386 should have their therapy tapered slowly if a decision is made to discontinue
387 corticosteroids and the patient should be observed closely for any evidence of
388 adverse effects, including adrenal insufficiency and exacerbation of symptoms
389 of arthritis.

390 Patients with initial hemoglobin values of 10 g or less who are to receive
391 long-term therapy should have hemoglobin values determined periodically.

392 The antipyretic and anti-inflammatory activities of the drug may reduce fever
393 and inflammation, thus diminishing their utility as diagnostic signs in
394 detecting complications of presumed noninfectious, noninflammatory painful
395 conditions.

396 Because of adverse eye findings in animal studies with drugs of this class, it is
397 recommended that ophthalmic studies be carried out if any change or
398 disturbance in vision occurs.

399 **Hepatic Effects:** As with other nonsteroidal anti-inflammatory drugs,
400 borderline elevations of one or more liver tests may occur in up to 15% of
401 patients. These abnormalities may progress, may remain essentially
402 unchanged, or may be transient with continued therapy. The SGPT (ALT) test
403 is probably the most sensitive indicator of liver dysfunction. Meaningful (3
404 times the upper limit of normal) elevations of SGPT or SGOT (AST) occurred
405 in controlled clinical trials in less than 1% of patients. A patient with
406 symptoms and/or signs suggesting liver dysfunction or in whom an abnormal
407 liver test has occurred, should be evaluated for evidence of the development
408 of more severe hepatic reaction while on therapy with naproxen. Severe
409 hepatic reactions, including jaundice and cases of fatal hepatitis, have been
410 reported with naproxen as with other nonsteroidal anti-inflammatory drugs.
411 Although such reactions are rare, if abnormal liver tests persist or worsen, if
412 clinical signs and symptoms consistent with liver disease develop, or if
413 systemic manifestations occur (eg, eosinophilia, rash, etc.), naproxen should
414 be discontinued.

415 **Renal Effects:** Caution should be used when initiating treatment with
416 naproxen in patients with considerable dehydration. It is advisable to
417 rehydrate patients first and then start therapy with naproxen. Caution is also
418 recommended in patients with pre-existing kidney disease (see WARNINGS:
419 *Advanced Renal Disease*).

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420 As with other nonsteroidal anti-inflammatory drugs, long-term administration
421 of naproxen to animals has resulted in renal papillary necrosis and other
422 abnormal renal pathology. In humans, there have been reports of impaired
423 renal function, renal failure, acute interstitial nephritis, hematuria, proteinuria,
424 renal papillary necrosis, and occasionally nephrotic syndrome associated with
425 naproxen-containing products and other NSAIDs since they have been
426 marketed.

427 A second form of renal toxicity has been seen in patients taking naproxen as
428 well as other nonsteroidal anti-inflammatory drugs. In patients with prerenal
429 conditions leading to a reduction in renal blood flow or blood volume, where
430 the renal prostaglandins have a supportive role in the maintenance of renal
431 perfusion, caution should be observed since administration of a nonsteroidal
432 anti-inflammatory drug may cause a dose-dependent reduction in
433 prostaglandin formation and may precipitate overt renal decompensation or
434 failure. Patients at greatest risk of this reaction are those with impaired renal
435 function, hypovolemia, heart failure, liver dysfunction, salt depletion, those
436 taking diuretics and ACE inhibitors, and the elderly. Discontinuation of
437 nonsteroidal anti-inflammatory therapy is typically followed by recovery to
438 the pretreatment state.

439 Naproxen and its metabolites are eliminated primarily by the kidneys;
440 therefore, the drug should be used with caution in such patients and the
441 monitoring of serum creatinine and/or creatinine clearance is advised. A
442 reduction in daily dosage should be considered to avoid the possibility of
443 excessive accumulation of naproxen metabolites in these patients. Naproxen-
444 containing products are not recommended for use in patients with moderate to
445 severe and severe renal impairment (creatinine clearance < 30 mL/min).

446 Chronic alcoholic liver disease and probably other diseases with decreased or
447 abnormal plasma proteins (albumin) reduce the total plasma concentration of
448 naproxen, but the plasma concentration of unbound naproxen is increased.
449 Caution is advised when high doses are required and some adjustment of
450 dosage may be required in these patients. It is prudent to use the lowest
451 effective dose.

452 Studies indicate that although total plasma concentration of naproxen is
453 unchanged, the unbound plasma fraction of naproxen is increased in the
454 elderly. Caution is advised when high doses are required and some adjustment
455 of dosage may be required in elderly patients. As with other drugs used in the
456 elderly, it is prudent to use the lowest effective dose.

457 **Hematological Effects:** Anemia is sometimes seen in patients receiving
458 NSAIDs, including naproxen. This may be due to fluid retention, GI loss, or
459 an incompletely described effect upon erythropoiesis. Patients on long-term

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460 treatment with NSAIDs, including naproxen, should have their hemoglobin or
461 hematocrit checked if they exhibit any signs or symptoms of anemia.

462 All drugs which inhibit the biosynthesis of prostaglandins may interfere to
463 some extent with platelet function and vascular responses to bleeding.

464 NSAIDs inhibit platelet aggregation and have been shown to prolong bleeding
465 time in some patients. Unlike aspirin, their effect on platelet function is
466 quantitatively less, of shorter duration, and reversible. Naproxen does not
467 generally affect platelet counts, prothrombin time (PT), or partial
468 thromboplastin time (PTT). Patients receiving naproxen who may be
469 adversely affected by alterations in platelet function, such as those with
470 coagulation disorders or patients receiving anticoagulants, should be carefully
471 monitored.

472 ***Fluid Retention and Edema:*** Peripheral edema has been observed in some
473 patients receiving naproxen. Since each ANAPROX or ANAPROX DS tablet
474 contains 25 mg or 50 mg of sodium (about 1 mEq per each 250 mg of
475 naproxen), and each teaspoonful of NAPROSYN Suspension contains 39 mg
476 (about 1.5 mEq per each 125 mg of naproxen) of sodium, this should be
477 considered in patients whose overall intake of sodium must be severely
478 restricted. For these reasons, ANAPROX, ANAPROX DS and NAPROSYN
479 Suspension should be used with caution in patients with fluid retention,
480 hypertension or heart failure.

481 ***Preexisting Asthma:*** Patients with asthma may have aspirin-sensitive
482 asthma. The use of aspirin in patients with aspirin-sensitive asthma has been
483 associated with severe bronchospasm, which can be fatal. Since cross
484 reactivity, including bronchospasm, between aspirin and other nonsteroidal
485 anti-inflammatory drugs has been reported in such aspirin-sensitive patients,
486 naproxen should not be administered to patients with this form of aspirin
487 sensitivity and should be used with caution in patients with preexisting
488 asthma.

489 ***Information for Patients:*** Naproxen, in NAPROSYN, EC-NAPROSYN,
490 ANAPROX, ANAPROX DS and NAPROSYN Suspension can cause
491 discomfort and, rarely, more serious side effects, such as gastrointestinal
492 bleeding, which may result in hospitalization and even fatal outcomes.
493 Although serious GI tract ulcerations and bleeding can occur without warning
494 symptoms, patients should be alert for the signs and symptoms of ulcerations
495 and bleeding, and should ask for medical advice when observing any
496 indicative signs or symptoms. Patients should be apprised of the importance
497 of this follow-up (see WARNINGS: *Gastrointestinal (GI) Effects-Risk of GI*
498 *Ulceration, Bleeding, and Perforation*).

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499 Patients should promptly report signs or symptoms of gastrointestinal
500 ulceration or bleeding, skin rash, unexplained weight gain or edema to their
501 physicians.

502 Patients should be informed of the warning signs and symptoms of
503 hepatotoxicity (eg, nausea, fatigue, lethargy, pruritus, jaundice, right upper
504 quadrant tenderness, and “flu-like” symptoms). If these occur, patients should
505 be instructed to stop therapy and seek immediate medical therapy.

506 Patients should also be instructed to seek immediate emergency help in the
507 case of an anaphylactoid reaction (see WARNINGS).

508 In late pregnancy, naproxen, in NAPROSYN, EC-NAPROSYN, ANAPROX,
509 ANAPROX DS, and NAPROSYN Suspension, should be avoided because it
510 may cause premature closure of the ductus arteriosus.

511 Caution should be exercised by patients whose activities require alertness if
512 they experience drowsiness, dizziness, vertigo or depression during therapy
513 with naproxen.

514 **Laboratory Tests:** Because serious GI tract ulcerations and bleeding can
515 occur without warning symptoms, physicians should monitor for signs or
516 symptoms of GI bleeding. If clinical signs and symptoms consistent with liver
517 or renal disease develop, systemic manifestations occur (eg, eosinophilia,
518 rash, etc.) or if abnormal liver tests persist or worsen, naproxen should be
519 discontinued.

520 **Drug Interactions:**

521 **Aspirin:** Concomitant administration of naproxen and aspirin is not
522 recommended because naproxen is displaced from its binding sites during the
523 concomitant administration of aspirin, resulting in lower plasma
524 concentrations and peak plasma levels.

525 **Methotrexate:** Caution should be used if naproxen is administered
526 concomitantly with methotrexate. Naproxen, naproxen sodium and other
527 nonsteroidal anti-inflammatory drugs have been reported to reduce the tubular
528 secretion of methotrexate in an animal model, possibly increasing the toxicity
529 of methotrexate.

530 **ACE-inhibitors:** Reports suggest that NSAIDs may diminish the
531 antihypertensive effect of ACE-inhibitors. The use of NSAIDs in patients who
532 are receiving ACE inhibitors may potentiate renal disease states (see
533 PRECAUTIONS: *Renal Effects*).

534 **Furosemide:** Clinical studies, as well as postmarketing observations, have
535 shown that NSAIDs can reduce the natriuretic effect of furosemide and

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536 thiazides in some patients. This response has been attributed to inhibition of
537 renal prostaglandin synthesis.

538 Lithium: Inhibition of renal lithium clearance leading to increases in plasma
539 lithium concentrations has also been reported. The mean minimum lithium
540 concentration increased 15% and the renal clearance was decreased by
541 approximately 20%. These effects have been attributed to inhibition of renal
542 prostaglandin synthesis by the NSAID. Thus, when NSAIDs and lithium are
543 administered concurrently, patients should be observed carefully for signs of
544 lithium toxicity.

545 Warfarin: The effects of warfarin and NSAIDs on GI bleeding are synergistic,
546 such that patients taking both drugs have a risk of serious GI bleeding that is
547 higher than patients taking either drug alone. No significant interactions have
548 been observed in clinical studies with naproxen and coumarin-type
549 anticoagulants. However, caution is advised since interactions have been seen
550 with other nonsteroidal agents of this class. The free fraction of warfarin may
551 increase substantially in some subjects and naproxen interferes with platelet
552 function.

553 ***Other Information Concerning Drug Interactions:***

554 Naproxen is highly bound to plasma albumin; it thus has a theoretical
555 potential for interaction with other albumin-bound drugs such as coumarin-
556 type anticoagulants, sulphonylureas, hydantoins, other NSAIDs, and aspirin.
557 Patients simultaneously receiving naproxen and a hydantoin, sulphonamide or
558 sulphonylurea should be observed for adjustment of dose if required.

559 Naproxen and other nonsteroidal anti-inflammatory drugs can reduce the
560 antihypertensive effect of propranolol and other beta-blockers.

561 Probenecid given concurrently increases naproxen anion plasma levels and
562 extends its plasma half-life significantly.

563 Due to the gastric pH elevating effects of H₂-blockers, sucralfate and intensive
564 antacid therapy, concomitant administration of EC-NAPROSYN is not
565 recommended.

566

567 ***Drug/Laboratory Test Interactions:*** Naproxen may decrease platelet
568 aggregation and prolong bleeding time. This effect should be kept in mind
569 when bleeding times are determined.

570 The administration of naproxen may result in increased urinary values for 17-
571 ketogenic steroids because of an interaction between the drug and/or its
572 metabolites with m-di-nitrobenzene used in this assay. Although 17-hydroxy-
573 corticosteroid measurements (Porter-Silber test) do not appear to be

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574 artifactually altered, it is suggested that therapy with naproxen be temporarily
575 discontinued 72 hours before adrenal function tests are performed if the
576 Porter-Silber test is to be used.

577 Naproxen may interfere with some urinary assays of 5-hydroxy indoleacetic
578 acid (SHIAA).

579 **Carcinogenesis:** A 2-year study was performed in rats to evaluate the
580 carcinogenic potential of naproxen at rat doses of 8, 16, and 24 mg/kg/day
581 (50, 100, and 150 mg/m²). The maximum dose used was 0.28 times the
582 systemic exposure to humans at the recommended dose. No evidence of
583 tumorigenicity was found.

584 **Pregnancy: Teratogenic Effects:** Pregnancy Category C. Reproduction
585 studies have been performed in rats at 20 mg/kg/day (125 mg/m²/day, 0.23
586 times the human systemic exposure), rabbits at 20 mg/kg/day (220
587 mg/m²/day, 0.27 times the human systemic exposure), and mice at 170
588 mg/kg/day (510 mg/m²/day, 0.28 times the human systemic exposure) with no
589 evidence of impaired fertility or harm to the fetus due to the drug. There are
590 no adequate and well-controlled studies in pregnant women. Because animal
591 reproduction studies are not always predictive of human response, naproxen
592 should not be used during pregnancy unless clearly needed.

593 **Nonteratogenic Effects:** There is some evidence to suggest that when
594 inhibitors of prostaglandin synthesis are used to delay preterm labor there is
595 an increased risk of neonatal complications such as necrotizing enterocolitis,
596 patent ductus arteriosus and intracranial hemorrhage. Naproxen treatment
597 given in late pregnancy to delay parturition has been associated with persistent
598 pulmonary hypertension, renal dysfunction and abnormal prostaglandin E
599 levels in preterm infants. Because of the known effect of drugs of this class on
600 the human fetal cardiovascular system (closure of ductus arteriosus), use
601 during third trimester should be avoided.

602 **Labor and Delivery:** In rat studies with NSAIDs, as with other drugs known
603 to inhibit prostaglandin synthesis, an increased incidence of dystocia, delayed
604 parturition, and decreased pup survival occurred. Naproxen-containing
605 products are not recommended in labor and delivery because, through its
606 prostaglandin synthesis inhibitory effect, naproxen may adversely affect fetal
607 circulation and inhibit uterine contractions, thus increasing the risk of uterine
608 hemorrhage.

609 **Nursing Mothers:** The naproxen anion has been found in the milk of
610 lactating women at a concentration equivalent to approximately 1% of
611 maximum naproxen concentration in plasma. Because of the possible adverse
612 effects of prostaglandin-inhibiting drugs on neonates, use in nursing mothers
613 should be avoided.

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614 **Pediatric Use:** Safety and effectiveness in pediatric patients below the age
615 of 2 years have not been established. Pediatric dosing recommendations for
616 juvenile arthritis are based on well-controlled studies (see DOSAGE AND
617 ADMINISTRATION). There are no adequate effectiveness or dose-response
618 data for other pediatric conditions, but the experience in juvenile arthritis and
619 other use experience have established that single doses of 2.5 to 5 mg/kg (as
620 naproxen suspension, see DOSAGE AND ADMINISTRATION), with total
621 daily dose not exceeding 15 mg/kg/day, are well tolerated in pediatric patients
622 over 2 years of age.

623 **Geriatric Use:** Studies indicate that although total plasma concentration of
624 naproxen is unchanged, the unbound plasma fraction of naproxen is increased
625 in the elderly. Caution is advised when high doses are required and some
626 adjustment of dosage may be required in elderly patients. As with other drugs
627 used in the elderly, it is prudent to use the lowest effective dose.

628 Experience indicates that geriatric patients may be particularly sensitive to
629 certain adverse effects of nonsteroidal anti-inflammatory drugs. While age
630 does not appear to be an independent risk factor for the development of peptic
631 ulceration and bleeding with naproxen administration, elderly or debilitated
632 patients seem to tolerate peptic ulceration or bleeding less well when these
633 events do occur. Most spontaneous reports of fatal GI events are in the
634 geriatric population (see WARNINGS).

635 Naproxen is known to be substantially excreted by the kidney, and the risk of
636 toxic reactions to this drug may be greater in patients with impaired renal
637 function. Because elderly patients are more likely to have decreased renal
638 function, care should be taken in dose selection, and it may be useful to
639 monitor renal function. Geriatric patients may be at a greater risk for the
640 development of a form of renal toxicity precipitated by reduced prostaglandin
641 formation during administration of nonsteroidal anti-inflammatory drugs (see
642 PRECAUTIONS: *Renal Effects*).

643 **ADVERSE REACTIONS**

644 Adverse reactions reported in controlled clinical trials in 960 patients treated
645 for rheumatoid arthritis or osteoarthritis are listed below. In general, reactions
646 in patients treated chronically were reported 2 to 10 times more frequently
647 than they were in short-term studies in the 962 patients treated for mild to
648 moderate pain or for dysmenorrhea. The most frequent complaints reported
649 related to the gastrointestinal tract.

650 A clinical study found gastrointestinal reactions to be more frequent and more
651 severe in rheumatoid arthritis patients taking daily doses of 1500 mg naproxen
652 compared to those taking 750 mg naproxen (see CLINICAL
653 PHARMACOLOGY).

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654 In controlled clinical trials with about 80 pediatric patients and in well-
655 monitored, open-label studies with about 400 pediatric patients with juvenile
656 arthritis treated with naproxen, the incidence of rash and prolonged bleeding
657 times were increased, the incidence of gastrointestinal and central nervous
658 system reactions were about the same, and the incidence of other reactions
659 were lower in pediatric patients than in adults.

660 In patients taking naproxen in clinical trials, the most frequently reported
661 adverse experiences in approximately 1 to 10% of patients are:

662 **Gastrointestinal (GI) Experiences, including:** heartburn*, abdominal pain*,
663 nausea*, constipation*, diarrhea, dyspepsia, stomatitis

664 **Central Nervous System:** headache*, dizziness*, drowsiness*,
665 lightheadedness, vertigo

666 **Dermatologic:** pruritus (itching)*, skin eruptions*, ecchymoses*, sweating,
667 purpura

668 **Special Senses:** tinnitus*, visual disturbances, hearing disturbances

669 **Cardiovascular:** edema*, palpitations

670 **General:** dyspnea*, thirst

671 *Incidence of reported reaction between 3% and 9%. Those reactions
672 occurring in less than 3% of the patients are unmarked.

673 In patients taking NSAIDs, the following adverse experiences have also been
674 reported in approximately 1 to 10% of patients.

675 **Gastrointestinal (GI) Experiences, including:** flatulence, gross
676 bleeding/perforation, GI ulcers (gastric/duodenal), vomiting

677 **General:** abnormal renal function, anemia, elevated liver enzymes, increased
678 bleeding time, rashes

679 The following are additional adverse experiences reported in <1% of patients
680 taking naproxen during clinical trials and through post-marketing reports.
681 Those adverse reactions observed through post-marketing reports are
682 italicized.

683 **Body as a Whole:** *anaphylactoid reactions, angioneurotic edema, menstrual*
684 *disorders, pyrexia (chills and fever)*

685 **Cardiovascular:** *congestive heart failure, vasculitis*

686 **Gastrointestinal:** *gastrointestinal bleeding and/or perforation, hematemesis,*
687 *jaundice, pancreatitis, vomiting, colitis, abnormal liver function tests,*
688 *nonpeptic gastrointestinal ulceration, ulcerative stomatitis*

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689 **Hemic and Lymphatic:** *eosinophilia, leucopenia, melena, thrombocytopenia,*
690 *agranulocytosis, granulocytopenia, hemolytic anemia, aplastic anemia*

691 **Metabolic and Nutritional:** *hyperglycemia, hypoglycemia*

692 **Nervous System:** *inability to concentrate, depression, dream abnormalities,*
693 *insomnia, malaise, myalgia, muscle weakness, aseptic meningitis, cognitive*
694 *dysfunction*

695 **Respiratory:** *eosinophilic pneumonitis*

696 **Dermatologic:** *alopecia, urticaria, skin rashes, toxic epidermal necrolysis,*
697 *erythema multiforme, Stevens-Johnson syndrome, photosensitive dermatitis,*
698 *photosensitivity reactions, including rare cases resembling porphyria cutanea*
699 *tarda (pseudoporphyria) or epidermolysis bullosa. If skin fragility, blistering*
700 *or other symptoms suggestive of pseudoporphyria occur, treatment should be*
701 *discontinued and the patient monitored.*

702 **Special Senses:** *hearing impairment*

703 **Urogenital:** *glomerular nephritis, hematuria, hyperkalemia, interstitial*
704 *nephritis, nephrotic syndrome, renal disease, renal failure, renal papillary*
705 *necrosis*

706 In patients taking NSAIDs, the following adverse experiences have also been
707 reported in <1% of patients.

708 **Body as a Whole:** *fever, infection, sepsis, anaphylactic reactions, appetite*
709 *changes, death*

710 **Cardiovascular:** *hypertension, tachycardia, syncope, arrhythmia,*
711 *hypotension, myocardial infarction*

712 **Gastrointestinal:** *dry mouth, esophagitis, gastric/peptic ulcers, gastritis,*
713 *glossitis, hepatitis, eructation, liver failure*

714 **Hemic and Lymphatic:** *rectal bleeding, lymphadenopathy, pancytopenia*

715 **Metabolic and Nutritional:** *weight changes*

716 **Nervous System:** *anxiety, asthenia, confusion, nervousness, paresthesia,*
717 *somnolence, tremors, convulsions, coma, hallucinations*

718 **Respiratory:** *asthma, respiratory depression, pneumonia*

719 **Dermatologic:** *exfoliative dermatitis*

720 **Special Senses:** *blurred vision, conjunctivitis*

721 **Urogenital:** *cystitis, dysuria, oliguria/polyuria, proteinuria*

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722

723 **OVERDOSAGE**

724 Significant naproxen overdose may be characterized by lethargy, dizziness,
725 drowsiness, epigastric pain, abdominal discomfort, heartburn, indigestion,
726 nausea, transient alterations in liver function, hypoprothrombinemia, renal
727 dysfunction, metabolic acidosis, apnea, disorientation or vomiting.
728 Gastrointestinal bleeding can occur. Hypertension, acute renal failure,
729 respiratory depression, and coma may occur, but are rare. Anaphylactoid
730 reactions have been reported with therapeutic ingestion of NSAIDs, and may
731 occur following an overdose. Because naproxen sodium may be rapidly
732 absorbed, high and early blood levels should be anticipated. A few patients
733 have experienced convulsions, but it is not clear whether or not these were
734 drug-related. It is not known what dose of the drug would be life threatening.
735 The oral LD₅₀ of the drug is 543 mg/kg in rats, 1234 mg/kg in mice, 4110
736 mg/kg in hamsters, and greater than 1000 mg/kg in dogs.

737 Patients should be managed by symptomatic and supportive care following a
738 NSAID overdose. There are no specific antidotes. Hemodialysis does not
739 decrease the plasma concentration of naproxen because of the high degree of
740 its protein binding. Emesis and/or activated charcoal (60 to 100 g in adults, 1
741 to 2 g/kg in children) and/or osmotic cathartic may be indicated in patients
742 seen within 4 hours of ingestion with symptoms or following a large overdose.
743 Forced diuresis, alkalinization of urine or hemoperfusion may not be useful
744 due to high protein binding.

745 **DOSAGE AND ADMINISTRATION**

746 **Rheumatoid Arthritis, Osteoarthritis and Ankylosing Spondylitis:**

NAPROSYN	250 mg or 375 mg or 500 mg	twice daily twice daily twice daily
ANAPROX	275 mg (naproxen 250 mg with 25 mg sodium)	twice daily
ANAPROX DS	550 mg (naproxen 500 mg with 50 mg sodium)	twice daily
NAPROSYN Suspension	250 mg (10 mL/2 tsp) or 375 mg (15 mL/3 tsp) or 500 mg (20 mL/4 tsp)	twice daily twice daily twice daily
EC-NAPROSYN	375 mg or 500 mg	twice daily twice daily

747 To maintain the integrity of the enteric coating, the EC-NAPROSYN tablet
748 should not be broken, crushed or chewed during ingestion.

749 During long-term administration, the dose of naproxen may be adjusted up or
750 down depending on the clinical response of the patient. A lower daily dose

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751 may suffice for long-term administration. The morning and evening doses do
752 not have to be equal in size and the administration of the drug more frequently
753 than twice daily is not necessary.

754 In patients who tolerate lower doses well, the dose may be increased to
755 naproxen 1500 mg per day for limited periods of up to 6 months when a
756 higher level of anti-inflammatory/analgesic activity is required. When treating
757 such patients with naproxen 1500 mg/day, the physician should observe
758 sufficient increased clinical benefits to offset the potential increased risk (see
759 CLINICAL PHARMACOLOGY and INDIVIDUALIZATION OF
760 DOSAGE).

761 **Geriatric Patients:** Studies indicate that although total plasma
762 concentration of naproxen is unchanged, the unbound plasma fraction of
763 naproxen is increased in the elderly. Caution is advised when high doses are
764 required and some adjustment of dosage may be required in elderly patients.
765 As with other drugs used in the elderly, it is prudent to use the lowest
766 effective dose.

767 **Juvenile Arthritis:** The recommended total daily dose of naproxen is
768 approximately 10 mg/kg given in 2 divided doses (ie, 5 mg/kg given twice a
769 day). A measuring cup marked in 1/2 teaspoon and 2.5 milliliter increments is
770 provided with the NAPROSYN Suspension. The following table may be used
771 as a guide for dosing of NAPROSYN Suspension:

772	Patient's Weight	Dose	Administered as
773	13 kg (29 lb)	62.5 mg bid	2.5 mL (1/2 tsp) twice daily
774	25 kg (55 lb)	125 mg bid	5.0 mL (1 tsp) twice daily
775	38 kg (84 lb)	187.5 mg bid	7.5 mL (1 1/2 tsp) twice daily

776 **Management of Pain, Primary Dysmenorrhea and Acute**
777 **Tendonitis and Bursitis:** The recommended starting dose is 550 mg of
778 naproxen sodium as ANAPROX/ANAPROX DS followed by 550 mg every
779 12 hours or 275 mg every 6 to 8 hours as required. The initial total daily dose
780 should not exceed 1375 mg of naproxen sodium. Thereafter, the total daily
781 dose should not exceed 1100 mg of naproxen sodium. NAPROSYN may also
782 be used but EC-NAPROSYN is not recommended for initial treatment of
783 acute pain because absorption of naproxen is delayed compared to other
784 naproxen-containing products (see CLINICAL PHARMACOLOGY,
785 INDICATIONS AND USAGE and INDIVIDUALIZATION OF DOSAGE).

786 **Acute Gout:** The recommended starting dose is 750 mg of NAPROSYN
787 followed by 250 mg every 8 hours until the attack has subsided. ANAPROX
788 may also be used at a starting dose of 825 mg followed by 275 mg every 8

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789 hours. EC-NAPROSYN is not recommended because of the delay in
790 absorption (see CLINICAL PHARMACOLOGY).

791 **HOW SUPPLIED**

792 **NAPROSYN Tablets:** 250 mg: round, yellow, biconvex, engraved with NPR
793 LE 250 on one side and scored on the other. Packaged in light-resistant bottles
794 of 100.

795 100's (bottle): NDC 0004-6313-01.

796 375 mg: pink, biconvex oval, engraved with NPR LE 375 on one side.
797 Packaged in light-resistant bottles of 100 and 500.

798 100's (bottle): NDC 0004-6314-01; 500's (bottle): NDC 0004-6314-14.

799 500 mg: yellow, capsule-shaped, engraved with NPR LE 500 on one side and
800 scored on the other. Packaged in light-resistant bottles of 100 and 500.

801 100's (bottle): NDC 0004-6316-01; 500's (bottle): NDC 0004-6316-14.

802 Store at 15° to 30°C (59° to 86°F) in well-closed containers; dispense in light-
803 resistant containers.

804 **NAPROSYN Suspension:** 125 mg/5 mL (contains 39 mg sodium, about 1.5
805 mEq/teaspoon): Available in 1 pint (473 mL) light-resistant bottles (NDC
806 0004-0028-28).

807 Store at 15° to 30°C (59° to 86°F); avoid excessive heat, above 40°C (104°F).
808 Dispense in light-resistant containers.

809 **EC-NAPROSYN Delayed-Release Tablets:** 375 mg: white, capsule-shaped,
810 imprinted with EC-NAPROSYN on one side and 375 on the other. Packaged
811 in light-resistant bottles of 100.

812 100's (bottle): NDC 0004-6415-01.

813 500 mg: white, capsule-shaped, imprinted with EC-NAPROSYN on one side
814 and 500 on the other. Packaged in light-resistant bottles of 100.

815 100's (bottle): NDC 0004-6416-01.

816 Store at 15° to 30°C (59° to 86°F) in well-closed containers; dispense in light-
817 resistant containers.

818 **ANAPROX Tablets:** Naproxen sodium 275 mg: light blue, oval-shaped,
819 engraved with NPS-275 on one side. Packaged in bottles of 100.

820 100's (bottle): NDC 0004-6202-01.

821 Store at 15° to 30°C (59° to 86°F) in well-closed containers.

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822 **ANAPROX DS Tablets:** Naproxen sodium 550 mg: dark blue, oblong-
823 shaped, engraved with NPS 550 on one side and scored on both sides.
824 Packaged in bottles of 100 and 500.

825 100's (bottle): NDC 0004-6203-01; 500's (bottle): NDC 0004-6203-14.

826 Store at 15° to 30°C (59° to 86°F) in well-closed containers.

827 * ALEVE is a registered trademark of Bayer-Roche L.L.C.

828

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