

Can you spot signs of pain in your dog?

4 QUICK QUESTIONS TO THINK ABOUT:

- ☐ Does your dog limp or appear stiff after exercise?
- ☐ Does your dog lag behind on walks?
- ☐ Is your dog reluctant to climb stairs or jump?
- ☐ Does your dog have difficulty rising?

A “Yes” to any of these questions may mean your dog is showing signs of canine osteoarthritis (OA).

Read on to learn more about OA, and work with your veterinary health care team to learn what you can do to help your dog.

RIMADYL[®]
(carprofen)

ZOETIS
PETCARE

Does your dog limp, show signs of pain, or tire easily?

YOUR DOG MAY HAVE OSTEOARTHRITIS (OA), BUT WHAT IS IT?

OA is a painful, progressive condition caused by wear and tear of the joints over time. OA may result in physical and emotional changes or signs, including:

- Limping, lameness, stiffness, or decreased movement of joints
- Decreased activity or exercise
- Sadness
- Drop in energy level

Dogs of any age, breed, or size may develop OA.¹

Less common signs of pain in dogs include:

- Faster heart rate
- Reduced appetite
- Reluctance to move²



Much like with humans, pain can impact your dog's behavior.³

To understand the effect of pain, observe how your dog is behaving in terms of:

- Energy and enthusiasm
- Happiness and contentedness
- Activity and comfort
- Calmness and relaxation

If any of these seem “off,” that could be a sign that your dog hurts.



I think my dog may have OA. What now?

OA is extremely common and painful, affecting about 37% of dogs*—and not just old ones. But there's good news: **the pain can be managed with a prescription treatment plan.**

You know more about your dog than you think. Talking with your vet and sharing what you know are vitally important. Let your vet know if:

- Your dog has ever been injured
- You have ever given your dog medication for pain, such as aspirin
- Your dog gained weight over the past year

*According to a recent U.S. study based on screening 504 dogs.⁴

IS YOUR DOG IN PAIN? Find out at

[OACHECKLIST.COM](https://oachecklist.com),

or scan the QR code below to fill out our short and simple OA checklist. Share it with your veterinary health care team. What you learn can make a big difference to your dog!



OA treatment means covering all the bases

OA in dogs is the result of:

- Poor joint structure from birth
- Traumatic injury
- Normal wear and tear on joints as your dog ages

Obesity can also contribute to OA or make it worse.

Your veterinarian considers all of these triggers when they design a treatment plan for your dog.

TREATMENT WILL GENERALLY ADDRESS BASICS, SUCH AS:

INFLAMMATORY PAIN (NSAIDs*)
AND OTHER PHARMACOLOGICS



The most important of all of these, though, is **managing your dog's pain**. If properly treated, you can help slow OA progression. The goals of OA treatment are to decrease pain and inflammation, to help your dog with:

- Increased activity
- Preserved muscle mass and strength
- Regained function
- Improved emotional well-being³

**A DOG IN PAIN WILL NOT
EXHIBIT THESE IMPROVEMENTS.
A DOG ON RIMADYL WILL**

*Nonsteroidal anti-inflammatory drugs.

RIMADYL®
(carprofen)

Why RIMADYL?

A HISTORY OF TRUSTED PAIN RELIEF

RIMADYL is a choice backed by confidence. It was the first FDA-approved NSAID for dogs and has been used more than all other canine NSAIDs combined.

RIMADYL IS THE MOST TRUSTED NSAID PRESCRIBED BY VETERINARIANS⁵:

- ✓ MORE THAN 3 BILLION DOSES DISPENSED⁶
- ✓ OVER 26 MILLION DOGS TREATED⁷
- ✓ OVER 22 YEARS OF RESEARCH

RIMADYL is also the top NSAID used during canine orthopedic surgeries and for continuous pain relief after surgery.⁸



Tablet not actual size.

IMPORTANT SAFETY INFORMATION: As a class, NSAIDs may be associated with gastrointestinal, kidney and liver side effects. These are usually mild, but may be serious. Pet owners should discontinue therapy and contact their veterinarian immediately if side effects occur. Evaluation for pre-existing conditions and regular monitoring are recommended for pets on any medication, including RIMADYL. Use with other NSAIDs or corticosteroids should be avoided. **See full Prescribing Information at the end of this brochure.**

RIMADYL helps keep dogs happy and active...

...WITH IMPROVED MOBILITY!

Taking RIMADYL at the recommended dose made it easier for dogs to do the activities they loved most.⁴ For example, dogs continually improved in stair climbing throughout 4 months on RIMADYL.⁴ After just 1 month on RIMADYL, dogs had a much easier time getting up after lying down.⁴

...WITH IMPROVED QUALITY OF LIFE!

After just 2 weeks on RIMADYL, dogs showed visible improvements in³:

ENERGY

HAPPINESS

ACTIVITY LEVEL

COMFORT

This success follows daily treatment with RIMADYL at label dose.



Plain and simple: RIMADYL gets dogs back to their playful, lovable selves

RIMADYL®
(carprofen)



How you help your dog's OA pain over time can make the difference

RIMADYL is such an effective treatment, you may see improvements in your dog's joint pain in as little as 2 weeks. You might think it's okay to stop treatment when you see your dog is feeling better.

That's not a good idea. Studies have shown that long-term treatment provides continuous improvement in your dog's OA pain and mobility.^{3,4}



**USE THE OA CHECKLIST NOW
AND AGAIN TO HELP YOU TRACK
YOUR DOG'S IMPROVEMENT**

Common questions about RIMADYL

HOW DOES RIMADYL WORK?

RIMADYL works by blocking the production of certain body chemicals that cause inflammation. The nonsteroidal anti-inflammatory properties work to reduce joint inflammation while the analgesic properties work to reduce pain.

RIMADYL Chewable Tablets are designed to taste good to dogs.

Keep RIMADYL Chewable Tablets in a secured storage area out of the reach of your dog and other pets. If your dog ingests more than your veterinarian prescribed, or if your other pets take RIMADYL Chewable Tablets, contact your veterinarian right away.



WHAT RESULTS CAN I EXPECT WITH RIMADYL FOR MY DOG'S OA PAIN?

RIMADYL can relieve the pain and inflammation of OA and improve your dog's mobility. Response varies from dog to dog but can be quite dramatic. In most dogs, improvement can be seen in a matter of days.

If RIMADYL is stopped or not given as directed, your dog's pain and inflammation may come back since OA is a progressive condition. But continuous daily treatment with RIMADYL at label dose has been proven to significantly improve dogs' functional ability and emotional well-being.³

WHAT'S THE LONG-TERM OUTLOOK IF MY DOG HAS OA?

While OA is progressive, a comprehensive treatment plan that includes RIMADYL can manage your dog's pain, and help keep your furry friend active and playful.



WHAT KIND OF SIDE EFFECTS ARE ASSOCIATED WITH NSAIDS?

Nonsteroidal anti-inflammatory drugs (NSAIDs) such as RIMADYL (carprofen) provide important benefits. However, serious but rare side effects have been reported in dogs taking drugs in this class. The most common NSAID-related side effects generally involve the stomach (such as bleeding ulcers). Side effects can occur with or without warning and, in rare situations, result in kidney or liver damage or death. Look for the following side effects that can indicate your dog may be having a problem with an NSAID or may have another medical problem:

- Decrease or increase in appetite
- Vomiting
- Change in bowel movements or behavior
- Yellowing of gums, skin or whites of the eyes
- Change in drinking or urinating habits

It is important to stop therapy and contact your veterinarian immediately if you think your dog has a medical problem or side effect from use of RIMADYL. If you have additional questions about possible side effects, talk to your veterinarian.



WHO SHOULD NOT TAKE RIMADYL?

- Dogs that have had an allergic reaction to carprofen, the active ingredient in RIMADYL
- Dogs that have had an allergic reaction to aspirin or other NSAIDs (eg, etodolac, meloxicam or deracoxib) such as hives, facial swelling or red or itchy skin
- Cats should not take RIMADYL. Call your veterinarian immediately if your cat accidentally receives RIMADYL
- People should not take RIMADYL. Keep RIMADYL and all medicines out of reach of children
- RIMADYL should not be given with other NSAIDs or steroids

**LEARN MORE ABOUT
RIMADYL BY GOING TO
[RIMADYL.COM](https://www.rimadyl.com)**



RIMADYL®

(carprofen)

Caplets/Chewable Tablets
For oral use in dogs only

Sterile Injectable Solution 50 mg/mL

For subcutaneous use in dogs only

Non-steroidal, anti-inflammatory drug

CAUTION: Federal law restricts this drug to use by or on the order of a licensed veterinarian.

DESCRIPTION: Rimadyl (carprofen) is a non-steroidal anti-inflammatory drug (NSAID) of the propionic acid class that includes ibuprofen, naproxen, and ketoprofen. Carprofen is the nonproprietary designation for a substituted carbazole, 6-chloro- α -methyl-9H-carbazole-2-acetic acid. The empirical formula is $C_{16}H_{12}ClNO_2$, and the molecular weight 273.72. The chemical structure of carprofen is shown above. Carprofen is a white, crystalline compound. It is freely soluble in ethanol, but practically insoluble in water at 25°C.

Rimadyl Injectable is a sterile solution containing carprofen. Each mL of Rimadyl Injectable contains 50.0 mg carprofen, 30.0 mg arginine, 88.5 mg glycocholic acid, 169.0 mg lecithin, 10.0 mg benzyl alcohol, 6.17 mg sodium hydroxide, with additional sodium hydroxide and hydrochloric acid as needed to adjust pH, and water for injection.

CLINICAL PHARMACOLOGY: Carprofen is a non-narcotic, non-steroidal anti-inflammatory agent with characteristic analgesic and antipyretic activity approximately equipotent to indomethacin in animal models.¹

The mechanism of action of carprofen, like that of other NSAIDs, is believed to be associated with the inhibition of cyclooxygenase activity. Two unique cyclooxygenases have been described in mammals.² The constitutive cyclooxygenase, COX-1, synthesizes prostaglandins necessary for normal gastrointestinal and renal function. The inducible cyclooxygenase, COX-2, generates prostaglandins involved in inflammation. Inhibition of COX-1 is thought to be associated with gastrointestinal and renal toxicity while inhibition of COX-2 provides anti-inflammatory activity. The specificity of a particular NSAID for COX-2 versus COX-1 may vary from species to species.³ In an *in vitro* study using canine cell cultures, carprofen demonstrated selective inhibition of COX-2 versus COX-1.⁴ Clinical relevance of these data has not been shown. Carprofen has also been shown to inhibit the release of several prostaglandins in two inflammatory cell systems: rat polymorphonuclear leukocytes (PMN) and human rheumatoid synovial cells, indicating inhibition of acute (PMN system) and chronic (synovial cell system) inflammatory reactions.⁵

Several studies have demonstrated that carprofen has modulatory effects on both humoral and cellular immune responses.⁶⁻⁹ Data also indicate that carprofen inhibits the production of osteoclast-activating factor (OAF), PGE₂, and PGE₃ by its inhibitory effect in prostaglandin biosynthesis.¹

Based upon comparison with data obtained from intravenous administration, carprofen is rapidly and nearly completely absorbed (more than 90% bioavailable) when administered orally.¹⁰ Peak blood plasma concentrations are achieved in 1–3 hours after oral administration of 1, 5, and 25 mg/kg to dogs. The mean terminal half-life of carprofen is approximately 8 hours (range 4.5–9.8 hours) after single oral doses varying from 1–35 mg/kg of body weight. After a 100 mg single intravenous bolus dose, the mean elimination half-life was approximately 11.7 hours in the dog. Rimadyl is more than 99% bound to plasma protein and exhibits a very small volume of distribution.

Comparison of a single 25 mg dose in Beagle dogs after subcutaneous and oral administration demonstrated that the dorsoscapular subcutaneous administration results in a slower rate of drug input (as reflected by mean peak observed concentrations) but comparable total drug absorption within a 12 hour dosing interval (as reflected by area under the curve from hours zero to 12 postdose).

Carprofen is eliminated in the dog primarily by biotransformation in the liver followed by rapid excretion of the resulting metabolites (the ester glucuronide of carprofen and the other glucuronides of 2 phenolic metabolites, 7-hydroxy carprofen and 8-hydroxy carprofen) in the feces (70–80%) and urine (10–20%). Some enterohepatic circulation of the drug is observed.

INDICATIONS: Rimadyl is indicated for the relief of pain and inflammation associated with osteoarthritis and for the control of postoperative pain associated with soft tissue and orthopedic surgeries in dogs.

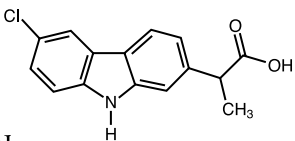
CONTRAINDICATIONS: Rimadyl should not be used in dogs exhibiting previous hypersensitivity to carprofen.

WARNINGS: Keep out of reach of children. Not for human use. Consult a physician in cases of accidental ingestion by humans. **For use in dogs only.**
Do not use in cats.

All dogs should undergo a thorough history and physical examination before initiation of NSAID therapy. Appropriate laboratory tests to establish hematological and serum biochemical baseline data prior to, and periodically during, administration of any NSAID should be considered. **Owners should be advised to observe for signs of potential drug toxicity (see Information for Dog Owners, Adverse Reactions, Animal Safety and Post-Approval Experience).**

PRECAUTIONS: As a class, cyclooxygenase inhibitory NSAIDs may be associated with gastrointestinal, renal and hepatic toxicity. Effects may result from decreased prostaglandin production and inhibition of the enzyme cyclooxygenase which is responsible for the formation of prostaglandins from arachidonic acid.¹¹⁻¹⁴ When NSAIDs inhibit prostaglandins that cause inflammation they may also inhibit those prostaglandins which maintain normal homeostatic function. These anti-prostaglandin effects may result in clinically significant disease in patients with underlying or pre-existing disease more often than in healthy patients.^{12,14} NSAID therapy could unmask occult disease which has previously been undiagnosed due to the absence of apparent clinical signs. Patients with underlying renal disease for example, may experience exacerbation or decompensation of their renal disease while on NSAID therapy.¹¹⁻¹⁴ The use of parenteral fluids during surgery should be considered to reduce the potential risk of renal complications when using NSAIDs perioperatively.

Carprofen is an NSAID, and as with others in that class, adverse reactions may occur with its use. The most frequently reported effects have been gastrointestinal signs. Events involving suspected renal, hematologic, neurologic, dermatologic, and hepatic effects have also been reported. Patients at greatest risk for renal toxicity are those that are dehydrated, on concomitant diuretic therapy, or those with renal, cardiovascular, and/or hepatic dysfunction. Concurrent administration of potentially nephrotoxic drugs should be approached cautiously, with appropriate monitoring. Concomitant use of Rimadyl with other anti-inflammatory drugs, such as other NSAIDs or corticosteroids, should be avoided because of the potential increase of adverse reactions, including gastrointestinal ulcerations and/or perforations. Sensitivity to drug-associated adverse reactions varies with the individual patient. Dogs that have experienced adverse reactions from one NSAID may experience adverse reactions from another NSAID. Rimadyl treatment was not associated with renal toxicity or gastrointestinal ulceration in well-controlled safety studies of up to 10 times the dose in healthy dogs. As with any parenterally injected product, good hygienic procedures should be used when administering Rimadyl Injectable.



Rimadyl is not recommended for use in dogs with bleeding disorders (e.g., Von Willebrand's disease), as safety has not been established in dogs with these disorders. The safe use of Rimadyl in animals less than 6 weeks of age, pregnant dogs, dogs used for breeding purposes, or in lactating bitches has not been established. Safety has not been established for IV or IM administration. Studies to determine the activity of Rimadyl when administered concomitantly with other protein-bound or similarly metabolized drugs have not been conducted. Drug compatibility should be monitored closely in patients requiring additional therapy. Such drugs commonly used include cardiac, anticonvulsant and behavioral medications. It has been suggested that treatment with carprofen may reduce the level of inhalant anesthetics needed.¹⁵ It is suggested to use different sites for additional injections. If additional pain medication is warranted after administration of the total daily dose of Rimadyl, alternative analgesia should be considered. The use of another NSAID is not recommended. Consider appropriate washout times when switching from one NSAID to another or when switching from corticosteroids use to NSAID use.

Due to the palatable nature of Rimadyl chewable tablets, store out of reach of dogs in a secured location. Severe adverse reactions may occur if large quantities of tablets are ingested. If you suspect your dog has consumed Rimadyl chewable tablets above the labeled dose, please call your veterinarian for immediate assistance and notify Zoetis at 1-888-963-8471.

INFORMATION FOR DOG OWNERS:

Rimadyl, like other drugs of its class, is not free from adverse reactions. Owners should be advised of the potential for adverse reactions and be informed of the clinical signs associated with drug intolerance. Adverse reactions may include decreased appetite, vomiting, diarrhea, dark or tarry stools, increased water consumption, increased urination, pale gums due to anemia, yellowing of gums, skin or white of the eye due to jaundice, lethargy, incoordination, seizure, or behavioral changes.

Serious adverse reactions associated with this drug class can occur without warning and in rare situations result in death (see Adverse Reactions). Owners should be advised to discontinue Rimadyl therapy and contact their veterinarian immediately if signs of intolerance are observed.

The vast majority of patients with drug related adverse reactions have recovered when the signs are recognized, the drug is withdrawn, and veterinary care, if appropriate, is initiated. Owners should be advised of the importance of periodic follow up for all dogs during administration of any NSAID.

ADVERSE REACTIONS: During investigational studies for the caplet formulation with twice daily administration of 1 mg/lb, no clinically significant adverse reactions were reported. Some clinical signs were observed during field studies (n=297) which were similar for carprofen caplet- and placebo-treated dogs. Incidences of the following were observed in both groups: vomiting (4%), diarrhea (4%), changes in appetite (3%), lethargy (1.4%), behavioral changes (1%), and constipation (0.3%). The product vehicle served as control.

There were no serious adverse events reported during clinical field studies with once daily administration of 2 mg/lb. The following categories of abnormal health observations were reported. The product vehicle served as control.

Percentage of Dogs with Abnormal Health Observations Reported in Clinical Field Study (2 mg/lb once daily)		
Observation	Rimadyl (n=129)	Placebo (n=132)
Inappetence	1.6	1.5
Vomiting	3.1	3.8
Diarrhea/Soft stool	3.1	4.5
Behavior change	0.8	0.8
Dermatitis	0.8	0.8
PU/PD	0.8	—
SAP increase	7.8	8.3
ALT increase	5.4	4.5
AST increase	2.3	0.8
BUN increase	3.1	1.5
Bilirubinuria	16.3	12.1
Ketonuria	14.7	9.1

Clinical pathology parameters listed represent reports of increases from pre-treatment values; medical judgment is necessary to determine clinical relevance.

During investigational studies of surgical pain for the caplet formulation, no clinically significant adverse reactions were reported. The product vehicle served as control.

Percentage of Dogs with Abnormal Health Observations Reported in Surgical Pain Field Studies with Caplets (2 mg/lb once daily)		
Observation*	Rimadyl (n=148)	Placebo (n=149)
Vomiting	10.1	13.4
Diarrhea/Soft stool	6.1	6.0
Ocular disease	2.7	0
Inappetence	1.4	0
Dermatitis/Skin lesion	2.0	1.3
Dysrhythmia	0.7	0
Apnea	1.4	0
Oral/Periodontal disease	1.4	0
Pyrexia	0.7	1.3
Urinary tract disease	1.4	1.3
Wound drainage	1.4	0

* A single dog may have experienced more than one occurrence of an event.

During investigational studies for the chewable tablet formulation, gastrointestinal signs were observed in some dogs. These signs included vomiting and soft stools.

There were no serious adverse events reported during clinical field studies for the injectable formulation. The following categories of abnormal health observations were reported. The product vehicle served as control.

Percentage of Dogs with Abnormal Health Observations Reported in Clinical Field Study with the Injectable		
Observation	Rimadyl (n=168)	Placebo (n=163)
Vomiting	10.1	9.2
Diarrhea/soft stool	2.4	3.7
Dermatitis	0.6	1.2
Dysrhythmia	0.6	0.6
Swelling	0	1.2
Dehiscence	1.2	0
WBC increase	13.7	6.7

* A single dog may have experienced more than one occurrence of an event.

Post-Approval Experience:

Although not all adverse reactions are reported, the following adverse reactions are based on voluntary post-approval adverse drug experience reporting. The categories of adverse reactions are listed in decreasing order of frequency by body system.

Gastrointestinal: Vomiting, diarrhea, constipation, inappetence, melena, hematemesis, gastrointestinal ulceration, gastrointestinal bleeding, pancreatitis.

Hepatic: Inappetence, vomiting, jaundice, acute hepatic toxicity, hepatic enzyme elevation, abnormal liver function test(s), hyperbilirubinemia, bilirubinuria, hypoalbuminemia. Approximately one-fourth of hepatic reports were in Labrador Retrievers.

Neurologic: Ataxia, paresis, paralysis, seizures, vestibular signs, disorientation.

Urinary: Hematuria, polyuria, polydipsia, urinary incontinence, urinary tract infection, azotemia, acute renal failure, tubular abnormalities including acute tubular necrosis, renal tubular acidosis, glucosuria.

Behavioral: Sedation, lethargy, hyperactivity, restlessness, aggressiveness.

Hematologic: Immune-mediated hemolytic anemia, immune-mediated thrombocytopenia, blood loss anemia, epistaxis.

Dermatologic: Pruritus, increased shedding, alopecia, pyotraumatic moist dermatitis (hot spots), necrotizing panniculitis/vasculitis, ventral ecchymosis.

In rare situations, injection site reactions including necrosis, abscess and seroma formation, and granulomas have been reported with the injectable formulation.

Immunologic or hypersensitivity: Facial swelling, hives, erythema.

In rare situations, death has been associated with some of the adverse reactions listed above.

To report a suspected adverse reaction call 1-888-963-8471.

DOSEAGE AND ADMINISTRATION: Always provide Client Information Sheet with prescription. Carefully consider the potential benefits and risk of Rimadyl and other treatment options before deciding to use Rimadyl. Use the lowest effective dose for the shortest duration consistent with individual response. The recommended dosage for oral administration to dogs is 2 mg/lb (4.4 mg/kg) of body weight daily. The total daily dose may be administered as 2 mg/lb of body weight once daily or divided and administered as 1 mg/lb (2.2 mg/kg) twice daily. For the control of postoperative pain, administer approximately 2 hours before the procedure. Rimadyl tablets are scored and dosage should be calculated in half-tablet increments. Tablets can be halved by placing the tablet on a hard surface and pressing down on both sides of the score. Rimadyl chewable tablets are palatable and willingly consumed by most dogs when offered by the owner. Therefore, they may be fed by hand or placed on food. Care should be taken to ensure that the dog consumes the complete dose.

The recommended dosage for subcutaneous administration to dogs is 2 mg/lb (4.4 mg/kg) of body weight daily. The total daily dose may be administered as either 2 mg/lb of body weight once daily or divided and administered as 1 mg/lb (2.2 mg/kg) twice daily. For control of post-operative pain, administer approximately 2 hours before the procedure.

PALATABILITY: A controlled palatability study was conducted which demonstrated that Rimadyl chewable tablets were readily accepted and consumed on first offering by a majority of dogs.

EFFECTIVENESS: Confirmation of the effectiveness of Rimadyl for the relief of pain and inflammation associated with osteoarthritis, and for the control of postoperative pain associated with soft tissue and orthopedic surgeries, was demonstrated in 7 placebo-controlled, masked studies examining the anti-inflammatory and analgesic effectiveness of Rimadyl caplets and injectable in various breeds of dogs.

Separate placebo-controlled, masked, multicenter field studies confirmed the anti-inflammatory and analgesic effectiveness of Rimadyl caplets when dosed at 2 mg/lb once daily or when divided and administered at 1 mg/lb twice daily. In these 2 field studies, dogs diagnosed with osteoarthritis showed statistically significant overall improvement based on lameness evaluations by the veterinarian and owner observations when administered Rimadyl at labeled doses.

Based upon the blood level comparison between subcutaneous and oral administration, Rimadyl effectiveness for osteoarthritis after dorsoscapular subcutaneous and oral administration should be similar, although there may be a slight delay in the onset of relief after subcutaneous injection.

Separate placebo-controlled, masked, multicenter field studies confirmed the effectiveness of Rimadyl caplets and injectable for the control of postoperative pain when dosed at 2 mg/lb once daily in various breeds of dogs. In these studies, dogs presented for ovariohysterectomy, cruciate repair and aural surgeries were administered Rimadyl preoperatively and for a maximum of 3 days (soft tissue) or 4 days (orthopedic) postoperatively. In general, dogs administered Rimadyl showed statistically significant reduction in pain scores compared to controls.

ANIMAL SAFETY: Laboratory studies in unanesthetized dogs and clinical field studies have demonstrated that Rimadyl is well tolerated in dogs after oral administration.

In target animal safety studies, Rimadyl was administered orally to healthy Beagle dogs at 1, 3, and 5 mg/lb twice daily (1, 3 and 5 times the recommended total daily dose) for 42 consecutive days with no significant adverse reactions. Serum albumin for a single female dog receiving 5 mg/lb twice daily decreased to 1.2 g/dL after 2 weeks of treatment, returned to the pre-treatment value (2.6 g/dL) after 4 weeks of treatment, and was 2.3 g/dL at the final 6-week evaluation. Over the 6-week treatment period, black or bloody stools were observed in 1 dog (1 incident) treated with 1 mg/lb twice daily and in 1 dog (2 incidents) treated with 3 mg/lb twice daily. Redness of the colonic mucosa was observed in 1 male that received 3 mg/lb twice daily.

Two of 8 dogs receiving 10 mg/lb orally twice daily (10 times the recommended total daily dose) for 14 days exhibited hypoalbuminemia. The mean albumin level in the dogs receiving this dose was lower (2.38 g/dL) than each of 2 placebo control groups (2.88 and 2.93 g/dL, respectively). Three incidents of black or bloody stool were observed in 1 dog. Five of 8 dogs exhibited reddened areas of duodenal mucosa on gross pathologic examination. Histologic exam of these areas revealed no evidence of ulceration, but did show minimal congestion of the lamina propria in 2 of the 5 dogs.

In separate safety studies lasting 13 and 52 weeks, respectively, dogs were administered orally up to 11.4 mg/lb/day (5.7 times the recommended total daily dose of 2 mg/lb) of carprofen. In both studies, the drug was well tolerated clinically by all of the animals. No gross or histologic changes were seen in any of the treated animals. In both studies, dogs receiving the highest doses had average increases in serum L-alanine aminotransferase (ALT) of approximately 20 IU.

In the 52-week study, minor dermatologic changes occurred in dogs in each of the treatment groups but not in the control dogs. The changes were described as slight redness or rash and were diagnosed as non-specific dermatitis. The possibility exists that these mild lesions were treatment related, but no dose relationship was observed.

Clinical field studies were conducted with 549 dogs of different breeds at the recommended oral doses for 14 days (297 dogs were included in a study evaluating 1 mg/lb twice daily and 252 dogs were included in a separate study evaluating 2 mg/lb once daily). In both studies the drug was clinically well tolerated and the incidence of clinical adverse reactions for Rimadyl-treated animals was no higher than placebo-treated

animals (placebo contained inactive ingredients found in Rimadyl). For animals receiving 1 mg/lb twice daily, the mean post-treatment serum ALT values were 11 IU greater and 9 IU less than pre-treatment values for dogs receiving Rimadyl and placebo, respectively. Differences were not statistically significant. For animals receiving 2 mg/lb once daily, the mean post-treatment serum ALT values were 4.5 IU greater and 0.3 IU less than pre-treatment values for dogs receiving Rimadyl and placebo, respectively. In the latter study, 3 Rimadyl-treated dogs developed a 3-fold or greater increase in (ALT) and/or (AST) during the course of therapy. One placebo-treated dog had a greater than 2-fold increase in ALT. None of these animals showed clinical signs associated with laboratory value changes. Changes in the clinical laboratory values (hematology and clinical chemistry) were not considered clinically significant. The 1 mg/lb twice daily course of therapy was repeated as needed at 2-week intervals in 244 dogs, some for as long as 5 years.

Clinical field studies were conducted in 297 dogs of different breeds undergoing orthopedic or soft tissue surgery. Dogs were administered 2 mg/lb of Rimadyl 2 hours prior to surgery then once daily, as needed for 2 days (soft tissue surgery) or 3 days (orthopedic surgery). Rimadyl was well tolerated when used in conjunction with a variety of anesthetic-related drugs. The type and severity of abnormal health observation in Rimadyl- and placebo-treated animals were approximately equal and few in number (see Adverse Reactions). The most frequent abnormal health observation was vomiting and was observed at approximately the same frequency in Rimadyl- and placebo-treated animals. Changes in clinicopathologic indices of hematopoietic, renal, hepatic, and clotting function were not clinically significant. The mean post-treatment serum ALT values were 7.3 IU and 2.5 IU less than pre-treatment values for dogs receiving Rimadyl and placebo, respectively. The mean post-treatment AST values were 3.1 IU less for dogs receiving Rimadyl and 0.2 IU greater for dogs receiving placebo.

Clinical field studies on the use of Rimadyl Injectable were conducted on 331 dogs undergoing orthopedic or soft tissue surgery. Dogs were administered 2 mg/lb of Rimadyl subcutaneously 2 hours prior to surgery and once daily thereafter, as needed, for 2 days (soft tissue surgery) or 3 days (orthopedic surgery). Rimadyl was well tolerated when used in conjunction with a variety of anesthetic-related drugs. The type and severity of abnormal health observations in Rimadyl- and placebo-treated animals were approximately equal and few in number (see Adverse Reactions). The most frequent abnormal health observation was vomiting and was observed at approximately the same frequency in Rimadyl- and placebo-treated animals. Changes in clinicopathologic indices of hematopoietic, renal, hepatic, and clotting function were not clinically significant. The mean post-treatment serum ALT values were 8.4 IU and 7.0 IU less than pre-treatment values for dogs receiving Rimadyl and placebo, respectively. The mean post-treatment AST values were 1.5 IU and 0.7 IU greater for dogs receiving Rimadyl and placebo, respectively.

Swelling and warmth were associated with the injection site after subcutaneous administration of Rimadyl Injectable. These findings were not clinically significant. Long term use of the injectable has not been studied.

STORAGE: Store tablets at controlled room temperature 15°–30°C (59°–86°F). Store injectable under refrigeration 2°–8°C (36°–46°F). Once broached, product may be stored at temperatures up to 25°C (77°F) for 28 days.

HOW SUPPLIED: Rimadyl caplets and chewable tablets are scored, and contain 25 mg, 75 mg, or 100 mg of carprofen per caplet or tablet. Each caplet size is packaged in bottles containing 30, 60, or 180 caplets. Each chewable tablet size is packaged in bottles containing 7, 30, 60, or 180 tablets. Rimadyl Injectable is supplied in 20-mL, amber, glass, sterile, multi-dose vials.

REFERENCES:

- Baruth H, *et al*: In *Anti-Inflammatory and Anti-Rheumatic Drugs*, Vol. II, Newer Anti-Inflammatory Drugs, Rainsford KD, ed. CRC Press, Boca Raton, p. 33, 1986.
- Vane JR, Botting RM: Mechanism of action of anti-inflammatory drugs. *Scand J Rheumatol* 25:102, pp. 9–21, 1996.
- Grossman CJ, Wiseman J, Lucas FS, *et al*: Inhibition of constitutive and inducible cyclooxygenase activity in human platelets and mononuclear cells by NSAIDs and COX-2 inhibitors. *Inflammation Research* 44:253–257, 1995.
- Ricketts AP, Lundy KM, Seibel SB: Evaluation of selective inhibition of canine cyclooxygenase 1 and 2 by carprofen and other nonsteroidal anti-inflammatory drugs. *Am J Vet Res* 59:11, pp. 1441–1446, November 1998.
- Ceuppens JL, *et al*: Non-steroidal anti-inflammatory agents inhibit the synthesis of IgM rheumatoid factor *in vitro*. *Lancet* 1:528, 1982.
- Ceuppens JL, *et al*: Endogenous prostaglandin E₂ enhances polyclonal immunoglobulin production by ionically inhibiting T suppressor cell activity. *Cell Immunol* 70:41, 1982.
- Schleimer RP, *et al*: The effects of prostaglandin synthesis inhibition on the immune response. *Immunopharmacology* 3:205, 1981.
- Leung KH, *et al*: Modulation of the development of cell mediated immunity: Possible roles of the products of cyclooxygenase and lipoxygenase pathways of arachidonic acid metabolism. *Int J Immunopharmacology* 4:195, 1982.
- Veit BC: Immunoregulatory activity of cultured-induced suppressor macrophages. *Cell Immunol* 72:14, 1982.
- Schmitt M, *et al*: Biopharmaceutical evaluation of carprofen following single intravenous, oral, and rectal doses in dogs. *Biopharm Drug Dispos* 11(7):585, 1990.
- Kore AM: Toxicology of nonsteroidal anti-inflammatory drugs. *Veterinary Clinics of North America, Small Animal Practice* 20, March 1990.
- Binns SH: Pathogenesis and pathophysiology of ischemic injury in cases of acute renal failure. *Compend for Cont Ed* 16:1, January 1994.
- Boothe DM: Prostaglandins: Physiology and clinical implications. *Compend for Cont Ed* 6:11, November 1984.
- Rubin SF: Nonsteroidal anti-inflammatory drugs, prostaglandins, and the kidney. *JAVMA* 188:9, May 1986.
- Ko CH, Lange DN, Mandsager RE, *et al*: Effects of butorphanol and carprofen on the minimal alveolar concentration of isoflurane in dogs. *JAVMA* 217:1025–1028, 2000.

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References: 1. Mele E. Epidemiology of osteoarthritis. *Veterinary Focus*. 2007;17(3):4-10. 2. Pessah S. Signs that your pooch is in pain. *American Kennel Club*. <http://www.akc.org/content/health/articles/signs-that-your-pooch-is-in-pain>. Accessed January 11, 2019. 3. Reid J, Wright A, Gober M, et al. Measuring chronic pain in osteoarthritic dogs treated long-term with carprofen, through its impact on health-related quality of life (HRQL) (in press). 4. Wright G. Rimadyl (carprofen) administration in newly diagnosed dogs with OA. 2015. 5. Data on file. Zoetis Inc. Brand Health Evaluation, 2016. 6. Data on file. Zoetis Inc. 7. Data on file. Zoetis Inc. Vetstreet Data Analytics 2018. National US Estimate for January 2009 - June 2018. 8. Data on file. Zoetis Inc. TI-02421, ZMR: PAS Wave 5 Treatment Study.

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