



**vetsulin**  
(porcine insulin zinc suspension)



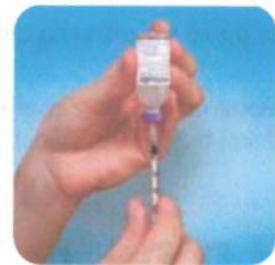
# A STEP-BY-STEP GUIDE to giving insulin to your cat.

Some pet owners find the idea of injecting their cat a little intimidating. That's why we've created this easy guide—to show you how to prepare and administer your cat's insulin. The process should soon be routine, and you can continue to enjoy a great life together. If you need additional support, please talk to your veterinarian.

## PREPARING THE DOSE.

After washing your hands, take the Vetsulin® (porcine insulin zinc suspension) bottle out of the refrigerator. Shake the bottle until the insulin is uniformly milky, allowing any foam to disperse. This evenly mixes the insulin to ensure the proper dose.

- 1 Carefully remove the cap from the needle.
- 2 Using a U-40 insulin syringe, pull the plunger back to draw air into the syringe about equal to the Vetsulin dose.
- 3 Insert the syringe into the bottle and inject the air. This will help to more easily draw the Vetsulin from the vial.
- 4 Turn the bottle and syringe upside down if you have not already done so.
- 5 Making sure the tip of the needle is in the Vetsulin, withdraw the correct dose into the syringe.
- 6 Before removing the needle from the bottle, check the syringe for any air bubbles. If bubbles are present, hold the syringe up and tap its side until the bubbles float to the top. Push them out with the plunger and withdraw the correct dose.
- 7 Remove the needle from the bottle. Be careful that you don't inject yourself.



Vetsulin helps you manage  
**FELINE DIABETES IN YOUR**  
one-of-a-kind cat.



**NOW YOU'RE READY TO GIVE THE INJECTION.**  
(SEE REVERSE SIDE.)

See Owner Information Sheet  
for full product information.

 **MERCK**  
Animal Health

NADA 141-236, Approved by FDA

**CAUTION**

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

**INDICATION**

vetsulin<sup>®</sup> (porcine insulin zinc suspension) is indicated for the reduction of hyperglycemia and hyperglycemia-associated clinical signs in dogs and cats with diabetes mellitus.

**CONTRAINDICATIONS**

Dogs and cats known to have a systemic allergy to pork or pork products should not be treated with vetsulin<sup>®</sup>. vetsulin<sup>®</sup> is contraindicated during periods of hypoglycemia.

**WARNINGS**

**User Safety:** For use in animals only. Keep out of the reach of children. Avoid contact with eyes. In case of contact, immediately flush eyes with copious amounts of water for 15 minutes. Accidental injection may cause clinical hypoglycemia. In case of accidental injection, seek medical attention immediately. Exposure to product may induce a local or systemic allergic reaction in sensitized individuals.

**Animal Safety:** Owners should be advised to observe for signs of hypoglycemia (see Owner Information Sheet). Use of this product, even at established doses, has been associated with hypoglycemia. An animal with signs of hypoglycemia should be treated immediately. Glucose should be given orally or intravenously as dictated by clinical signs. Insulin should be temporarily withheld and, subsequently, the dosage should be adjusted, if indicated. Any change in insulin should be made cautiously and only under a veterinarian's supervision. Changes in insulin strength, manufacturer, type, species (animal, human) or method of manufacture (rDNA versus animal-source insulin) may result in the need for a change in dosage.

Appropriate diagnostic tests should be performed to rule out endocrinopathies in pets that are difficult to regulate (e.g., hyperadrenocorticism in dogs and hyperthyroidism in cats).

**PRECAUTIONS**

Animals presenting with severe ketoacidosis, anorexia, lethargy, and/or vomiting should be stabilized with short-acting insulin and appropriate supportive therapy until their condition is stabilized. As with all insulin products, careful patient monitoring for hypoglycemia and hyperglycemia are essential to attain and maintain adequate glycemic control and prevent associated complications. Overdosage can result in profound hypoglycemia and death. Progestogens, certain endocrinopathies, and glucocorticoids can have an antagonistic effect on insulin activity. Intact litters should be ovariohysterectomized. Progestogen and glucocorticoid use should be avoided.

**Drug Interactions:**

In the US clinical effectiveness studies, dogs and cats received various medications while being treated with vetsulin<sup>®</sup> including antimicrobials, antivirals, antifungals, antihistamines, analgesics, anesthetics/tranquilizers, diuretics, bronchodilators, corticosteroids (cats), NSAIDs, thyroid hormone supplementation, hyperthyroid medication (methimazole), internal and external parasitides, anti-emetics, dermatological topical treatments and oral supplements, ophthalmic preparations containing antimicrobials and antiinflammatories, and various vaccines. No medication interactions were reported. This drug was not studied in dogs receiving corticosteroids.

**Reproductive Safety:** The safety and effectiveness of vetsulin<sup>®</sup> in breeding, pregnant, and lactating dogs and cats has not been evaluated.

**ADVERSE REACTIONS**

**Dogs**

In the field effectiveness and safety study, 66 dogs were treated with vetsulin<sup>®</sup>. Sixty-two dogs were included in the assessment of safety. Hypoglycemia (defined as blood glucose < 50 mg/dL) with or without associated clinical signs occurred in 35.5% (22/62) of the dogs at various times during the study. Clinical signs of hypoglycemia were generally mild in nature (described as weakness, lethargy, stumbling, falling down, and/or depression). Disorientation and collapse were reported less frequently and occurred in 16.1% (10/62) of the dogs. Two dogs had a seizure and one dog died during the seizure. Although never confirmed, the presumptive diagnosis was hypoglycemia-induced seizures. In the rest of the dogs, hypoglycemia resolved with appropriate therapy and adjustments in insulin dosage. Seven owners recorded the following observations about the injection site on the home monitoring forms: swollen, painful, sore, and a bleb under the skin. The following clinical observations occurred in the field study following treatment with vetsulin<sup>®</sup> and may be directly attributed to the drug or may be secondary to the diabetic state or other underlying conditions in the dogs: hematuria, vomiting, diarrhea, pancreatitis, non-specific hepatopathy/pancreatitis, development of cataracts, and urinary tract infections.

In a 21-day field safety and effectiveness study, 40 dogs, already well controlled on vetsulin<sup>®</sup>, were administered vetsulin<sup>®</sup> using a VetPen<sup>™</sup> insulin pen loaded with a pre-filled 2.7 mL vetsulin<sup>®</sup> cartridge and 29 gauge/12 mm pen needles. All dogs enrolled in the study were evaluated for safety. Loss of diabetic control was reported in 10 dogs, 3 of which were withdrawn from the study. Four dogs' loss of control resolved after dose adjustment while still using the insulin pen. For the remaining 3 dogs, the loss of diabetic control was reported at the end of the study and outcome was not documented. Two dogs had injection site reactions: edema in one dog and two instances of crusting in another. Poor appetite and weight loss was reported in one dog.

**Cats**

In a field effectiveness and safety study, safety data was reported for 78 cats receiving vetsulin<sup>®</sup>. Hypoglycemia (defined as blood glucose < 50 mg/dL) was reported in 61 cats (88 total incidences). Fifteen of the occurrences (involving 13 cats) were associated with clinical signs described as lethargy, diarrhea, decreased appetite/anorexia, vomiting, and hypothermia. One cat had seizures following accidental overdosing by the owner and again during the subsequent dose adjustment period. The cat responded to supportive therapy and had no further hypoglycemic episodes. In all cases of hypoglycemia, the clinical signs resolved following symptomatic treatment and/or dose adjustment. Polyneuropathy was reported in 4 cats. Two injection site reactions were reported: one as a mildly thickened subcutaneous tissue reaction and the second as a mild bruising.

The following clinical observations occurred in the field study following treatment with vetsulin<sup>®</sup> and may be directly attributed to the drug or may be secondary to the diabetic state or other underlying conditions in the cats: vomiting, lethargy, diarrhea, decreased appetite/anorexia, pancreatitis, dermal events, respiratory disease, urinary tract disorder, renal disease, dehydration, weight loss, polydipsia, polyuria, behavioral change, and ocular discharge/conjunctivitis. In a smaller field effectiveness and safety study, 14 cats were treated with vetsulin<sup>®</sup>. Hypoglycemia was reported in 6 cats (6 total occurrences). Lethargy not associated with hypoglycemia was reported in 4 cats (6 total occurrences). The following clinical observations occurred in the field study following treatment with vetsulin<sup>®</sup> and may be directly attributed to the drug or may be secondary to the diabetic state or other underlying conditions in the cats: foul odor to stool, diarrhea, dull coat, rapid, shallow breathing, stiff gait in rear, gallop rhythm, and pruritus with alopecia. During the 1998-2007 period, the following adverse events in 50 cats treated with porcine insulin zinc suspension were reported to Intervet International and Intervet Inc: Death, seizures, lack of effectiveness/dysregulation, hypoglycemia, allergic or skin reaction, lethargy, vomiting/diarrhea, injection pain, hyperthermia, nystagmus, PU/PD, and abnormal behavior.

In a 21-day field safety and effectiveness study, 36 cats, already well controlled on vetsulin<sup>®</sup>, were administered vetsulin<sup>®</sup> using a VetPen<sup>™</sup> insulin pen loaded with a pre-filled 2.7 mL vetsulin<sup>®</sup> cartridge and 29 gauge/12 mm pen needles. Loss of diabetic control was reported in three cats all of which resolved after dose adjustment while still using the insulin pen. Hypoglycemia was reported in one cat. The cat recovered with supportive care and dose adjustment.

To report suspected adverse drug experiences, call Merck at 1-800-224-5318.

For additional information about adverse drug experience reporting for animal drugs, contact FDA at 1-888-FDA-VETS, or <http://www.fda.gov/AnimalVeterinary/Safety/Health>

**Use contents within 42 days of first puncture.**

Additional information about vetsulin<sup>®</sup>, VetPen<sup>™</sup>, and diabetes mellitus can be found at [www.vetsulin.com](http://www.vetsulin.com)

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## GIVING THE INJECTION.

You've measured the correct dose for your cat, and now you're ready to inject Vetsulin<sup>®</sup> (porcine insulin zinc suspension). Your first step is to find a good spot. Injections should be given just under the skin, 1 to 2 inches from the middle of your cat's back. The location should be altered from behind the shoulder blade to slightly in front of the hip bone. The choice depends on your veterinarian's preference and what suits you and your cat. Alternating between your cat's left and right side will help to ensure greater long-term comfort.

**1** If necessary, ask someone to help you hold your cat.

**2** Hold the syringe in the hand you usually use. For safety—and to keep from losing any of your cat's dose—don't place your finger on the plunger until the needle is in the skin.

**3** Using your free hand, pinch up a fold of skin (a), and gently insert the needle into the center of the fold (b) as instructed by your veterinarian. Once the needle is through the skin, gently push the plunger in as far as it will go (c).

**4** Pull the needle out, being careful not to inject yourself.

**5** Dispose of the syringe in an appropriate manner (sharps/biohazard disposal).



## YOU DID IT!

REWARD YOUR CAT WITH SOMETHING HE OR SHE LIKES, SUCH AS A SCRATCH, NUZZLE, OR TREAT.



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(porcine insulin zinc suspension)



**QUESTIONS? VISIT US ONLINE AT [WWW.VETSULIN.COM](http://WWW.VETSULIN.COM).**

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