

**Gastrointestinal Disorders**

# CANINE GASTRIC DILATATION-VOLVULUS (GDV)



Commonly known as bloat, gastric dilatation-volvulus is a potentially life-threatening condition of dogs in which the stomach rapidly expands with gas, food and/or fluid (gastric dilatation) and twists on itself (volvulus), trapping stomach contents.

The condition occurs most commonly in large, deep-chested dog breeds, such as German Shepherds, Great Danes and Doberman Pinschers. However, even small and medium breed dogs with a deep chest conformation can develop GDV.

Despite years of research, the specific cause (or causes) of GDV still is not well understood, but several predisposing risk factors have been identified. Dog-related risk factors for GDV include large breed size, a deep and narrow thorax, a first-degree relative (parent, littermate, offspring) that had an episode, increasing age, faster speed of eating, and a nervous or fearful temperament.<sup>1-6</sup>

Research has disproven the myths that implicated dry, extruded, cereal- and soy protein-based dog foods in GDV.<sup>4,5</sup> Rather than a specific diet type, current dietary management recommendations for reducing the risk of GDV focus on feeding practices and feeding environment management.

**Key Messages**

- Large and giant breed dogs at risk for GDV need complete and balanced diets that meet the energy (calorie) and nutrient requirements for their particular life stage.
- Two to three small meals should be fed daily, instead of one large meal, to reduce the volume of food in the stomach at one time.
- Feeding dogs at risk for GDV from floor level, rather than from an elevated platform or feeder, may help reduce occurrence.
  - Research has shown that feeding from an elevated food bowl *increased* the risk of GDV despite earlier studies suggesting that a raised food bowl reduced the risk.<sup>3</sup>

*(continued on next page)*

**DID YOU KNOW?**

Eating from an elevated food bowl may actually increase – not decrease – the risk of gastric dilatation-volvulus in large and giant breed dogs.<sup>3</sup>

## Key Messages (continued)

- Slowing the rate of eating may help prevent GDV in some dogs. Practices that may slow food consumption and reduce swallowing of air (aerophagia) include:
  - placing large balls in the food bowl
  - feeding from a muffin tin, puzzle feeder or bowl designed specifically to decrease eating speed
  - separating dogs to minimize competitive eating
  - feeding food with a large kibble size
- While soy- or grain-based ingredients do *not* increase the risk of GDV, feeding a high-fat dry dog food might increase risk for GDV development in large and giant breed dogs.<sup>5</sup> Dietary fat is known to delay stomach emptying in dogs, and decreased gut motility has long been associated with GDV.<sup>7</sup>

## References

1. Glickman, L. T., Glickman, N. W., Pérez, C. M., Schellenberg, D. B., & Lantz, G. C. (1994). Analysis of risk factors for gastric dilatation and dilatation-volvulus in dogs. *Journal of the American Veterinary Medical Association*, 204(9), 1465–1471.
2. Glickman, L. T., Glickman, N. W., Schellenberg, D. B., Simpson, K., & Lantz, G. C. (1997). Multiple risk factors for the gastric dilatation-volvulus syndrome in dogs: A practitioner/owner case-control study. *Journal of the American Animal Hospital Association*, 33(3), 197–204. doi: 10.5326/15473317-33-3-197
3. Glickman, L. T., Glickman, N. W., Schellenberg, D. B., Raghavan, M., & Lee, T. (2000). Non-dietary risk factors for gastric dilatation-volvulus in large and giant breed dogs. *Journal of the American Veterinary Medical Association*, 217(10), 1492–1499. doi: 10.2460/javma.2000.217.1492
4. Raghavan, M., Glickman, N., McCabe, G., Lantz, G., & Glickman, L. T. (2004). Diet-related risk factors for gastric dilatation-volvulus in dogs of high-risk breeds. *Journal of the American Animal Hospital Association*, 40(3), 192–203. doi: 10.5326/0400192
5. Raghavan, M., Glickman, N. W., & Glickman, L. T. (2006). The effect of ingredients in dry dog foods on the risk of gastric dilatation-volvulus in dogs. *Journal of the American Animal Hospital Association*, 42(1), 28–36. doi: 10.5326/0420028
6. Schellenberg, D., Yi, Q., Glickman, N. W., & Glickman, L. T. (1998). Influence of thoracic conformation and genetics on the risk of gastric dilatation-volvulus in Irish setters. *Journal of the American Animal Hospital Association*, 34(1), 64–73. doi: 10.5326/15473317-34-1-64
7. Gazzola, K. M., & Nelson, L. L. (2014). The relationship between gastrointestinal motility and gastric dilatation-volvulus in dogs. *Topics in Companion Animal Medicine*, 29(3), 64–66. doi: 10.1053/j.tcam.2014.09.006

The Purina Institute aims to help put nutrition at the forefront of pet health discussions by providing user-friendly, science-based information that helps pets live longer, healthier lives.