



Information About When To Spay Or Neuter Your Dog

The ideal timing for spaying or neutering your dog depends on a wide variety of factors and is no longer an easy “one size fits all” answer. We ask that you discuss with your veterinarian and consider these important factors in the decision. Recommended further reading: https://www.petmd.com/dog/care/evr_determining_best_age_to_spay_or_neuter

1. Your pet's lifestyle and activity goals:

- ☆ An intact dog may not be allowed at daycare
- ☆ A female dog in heat (estrus) is at risk of pregnancy. Daycare, dog parks, and other social activities may be risky
- ☆ Highly active larger, giant dogs and participation in sporting activities (e.g., agility) may increase risk of joint and ligament disease if sterilized before 1 year

2. Ability to manage an intact (not sterilized) pet behaviorally:

- ☆ Avoidance of high risk environments/interactions during female in heat
- ☆ Bleeding and “diaper” use for female in heat
- ☆ Escape and roaming behavior with intact male; urine marking and mounting

3. The health risks of remaining intact (not sterilized):

- ☆ Increased breast (mammary) cancer in females
- ☆ Risk of uterine infection (pyometra) in females
- ☆ Increased testicular cancer, benign prostatic hypertrophy (BPH), and perianal growths in males

4. The increased cost and potential increased surgical risk of later sterilization:

- ☆ Larger scrotum and potential increased scrotal bleeding/hematoma after neuter
- ☆ Larger ovarian and uterine blood vessels, increased fat, decreased visualization, and increased risk of bleeding with spay
- ☆ Emergency pyometra surgery is expensive

5. The current understanding on increased health risks of sterilization:

- ☆ Some breeds have increased risk of certain cancers with sterilization which varies by age and sex. The breed chart below considers this current information. This was published in a study by UC Davis in July 2020: <https://www.frontiersin.org/articles/10.3389/fvets.2020.00388/full>
- ☆ Increased risk of urinary incontinence in female dogs
- ☆ Increased risk of obesity and diabetes
- ☆ Increased risk of joint disease in large dogs (especially cranial cruciate disease [ACL])

SUGGESTED GUIDELINES FOR AGE OF NEUTERING: 5 MIXED BREED GROUPS								
	Males				Females			
	Leave intact	Choice	Beyond 11 months	Beyond 23 months	Leave intact	Choice	Beyond 11 months	Beyond 23 months
Small		✓				✓		
Medium		✓				✓		
Standard			✓				✓	
Large			✓				✓	
Giant				✓			✓*	

*Consider neutering beyond 11 months due to weight.

Summary of spaying and neutering guidelines based on findings regarding joint disorders and cancers. The term “choice” means there was no increased risk for any age of neutering.

Source: Hart BL, Hart LA, Thigpen AP, Willits NH. Assisting decision-making on age of neutering for mixed breed dogs of five weight categories: associated joint disorders and cancers. *Front. Vet. Sci.* (in press).



SUGGESTED GUIDELINES FOR AGE OF NEUTERING: 35 BREEDS

	Males					Females				
	Leave intact	Choice	Beyond 6 months	Beyond 11 months	Beyond 23 months	Leave intact	Choice	Beyond 6 months	Beyond 11 months	Beyond 23 months
Australian Cattle Dog		✓						✓		
Australian Shepherd		✓					✓			
Beagle				✓			✓			
Bernese Mt. Dog					✓		✓			
Border Collie				✓					✓	
Boston Terrier				✓			✓			
Boxer					✓					✓
Bulldog		✓					✓			
Cavalier King Charles Spaniel		✓					✓			
Chihuahua		✓					✓			
Cocker Spaniel			✓							✓
Collie		✓							✓	
Corgi			✓				✓			
Dachshund		✓					✓			
Doberman Pinscher	✓									✓
English Springer Spaniel		✓							✓	
German Shepherd					✓					✓
Golden Retriever				✓		✓				
Great Dane		✓					✓			
Irish Wolfhound					✓		✓			
Jack Russell Terrier		✓					✓			
Labrador Retriever			✓						✓	
Maltese		✓					✓			
Miniature Schnauzer		✓					✓			
Pomeranian		✓					✓			
Poodle (Toy)		✓					✓			
Poodle (Miniature)				✓			✓			
Poodle (Standard)					✓		✓			
Pug		✓					✓			
Rottweiler				✓				✓		
Saint Bernard		✓						✓		
Shetland Sheepdog		✓								✓
Shih Tzu		✓								✓
West Highland White Terrier		✓					✓			
Yorkshire Terrier		✓					✓			

Summary of spaying and neutering guidelines based on findings regarding increased risk of joint disorders and cancers. The term "choice" means there was no increased risk for any age.

Source: Hart BL, Hart LA, Thigpen AP, Willits NH. Assisting decision-making on age of neutering for 35 breeds of dogs: associated joint disorders, cancers and urinary incontinence. *Front Vet Med.* (2020) 7:388. doi: 10.3389/fvets.2020.00388