Potential Health Implications of Early Neutering in Labradors

By: Stacey Green

There has been ongoing research into the potential effects of neutering and spaying large breed dogs prior to reaching sexual maturity—generally around 11–12 months of age in males and the first heat (estrus) in females.

A recent large-scale research study examining approximately **1,500 dogs per group**, specifically **Labrador Retrievers** and Golden Retrievers, evaluated the incidence of orthopedic conditions including **hip dysplasia, elbow dysplasia, and cranial cruciate ligament (ACL) injuries**, as well as the occurrence of **several types of cancer.**

The findings demonstrated a **significant increase in orthopedic disorders** in both breeds when dogs were neutered or spayed **before sexual maturity**. This increased risk is believed to be related to the role of reproductive hormones in skeletal development. During puberty, rising levels of estrogen, progesterone, and testosterone signal the **closure of growth plates** in the long bones, bringing skeletal growth to completion.

Dogs altered prior to puberty do not experience this natural hormonal rise, allowing long bones —particularly in the limbs—to continue growing for a longer period. This often results in **increased height and altered limb proportions** compared to intact dogs. These changes can affect joint biomechanics and stability during development, which appears to contribute to a higher incidence of orthopedic injury later in life.

Notably, the study found **little to no increase in cancer risk in Labrador Retrievers** associated with delayed neutering, distinguishing them from some other large breeds.

Our Recommendation

Based on current research, we recommend **considering delayed neutering or spaying of Labrador Retrievers until at least 18 months of age**, allowing time for normal skeletal development and growth plate closure.