

## *MEDVET CLINICAL REVIEW*

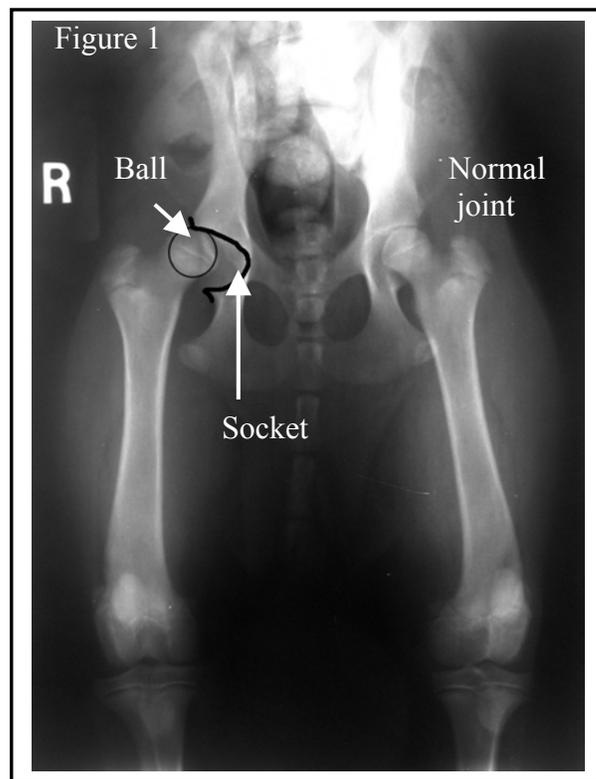
# Juvenile Pubic Symphysiodesis for Treatment of Hip Dysplasia in Dogs

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Canine hip dysplasia (CHD) is a potentially debilitating disease affecting primarily large breed dogs. Many factors influence the development of CHD including genetics and nutrition. The normal canine hip is a “ball and socket” joint. The femoral head (ball) should fit tightly into the acetabulum (socket). In dysplastic hips, the ball and socket are separated and loose leading to abnormal contact and ultimately degeneration of the joint (**Figure 1**). Early symptoms of CHD are usually managed medically with anti-inflammatory drugs, low-impact activity, and weight control. As clinical signs worsen, surgical intervention is recommended. Triple pelvic osteotomy (TPO), excisional arthroplasty, and total hip replacement are the most commonly used surgical procedures for treatment of CHD. While excellent results can be achieved with these surgeries, they require a considerable amount of financial, emotional, and time investment and can be technically demanding to perform. Recently, a surgical procedure has been introduced that appears to greatly improve dysplastic hips by altering development of the growing dog’s pelvis.

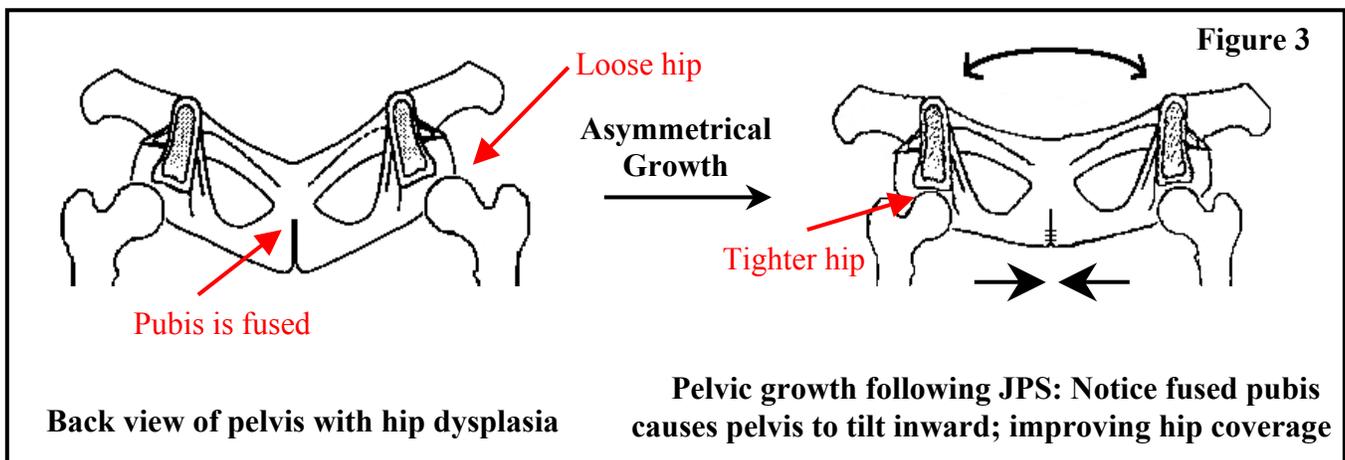
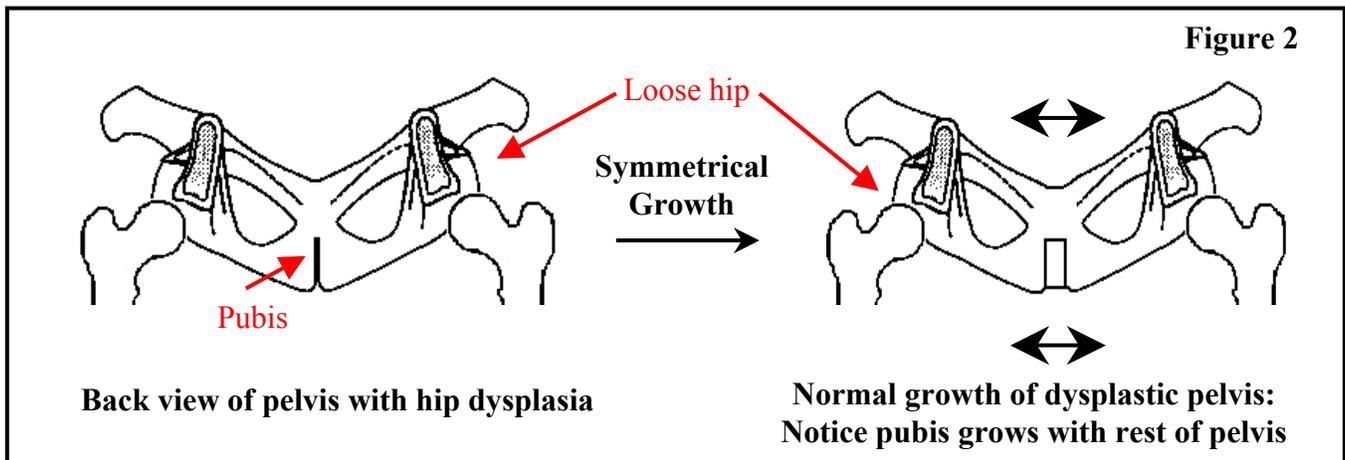
Juvenile pubic symphysiodesis (JPS) is a procedure that causes the hip socket to rotate and improve the contact with the ball of the femur. Like all bones, the pelvis in young dogs has growth plates that allow it to increase in size as the dog matures. By surgically destroying a portion of the pubic growth plate, JPS alters the normal growth of the pelvis. Continued growth forces the socket to rotate and better cover the femoral ball improving joint function. Dysplastic puppies are reported to return to a normal gait and achieve diminished hip laxity following JPS.

A recent study showed dramatic improvements in hip laxity in dysplastic puppies following JPS. Puppies had normal, pain free gaits without any complications from the pubic growth plate closure. The growth plate closure did result in a narrowed pelvic canal but this did not appear to be clinically significant. Results indicated that the greatest benefit from JPS was achieved in puppies 3-4 months of age but significant improvement can be expected in patients up to 5 months old. Puppies older than 24 months are not expected to improve significantly following JPS.



Juvenile pubic symphysiodesis is considered to be a prophylactic procedure since most dogs do not display clinical signs of hip dysplasia until they are older than 6 months of age. JPS should be strongly considered in puppies of proper age at risk for hip dysplasia. Risk factors include puppies where one or both parents have hip dysplasia or when hip laxity is demonstrated in the puppy on physical examination or X-rays. Some institutions have gone as far as to recommend JPS for puppies of any breed potentially at risk for hip dysplasia (Labrador retrievers, Rottweilers, German Shepherds, Golden retrievers, etc.), regardless of familial history. All puppies must be surgically sterilized at the time a JPS is performed because only the physical deformity is corrected not the genetic cause.

This is a very exciting technique and is expected to change how hip dysplasia is managed in the future. This procedure has been performed at MedVet and results appear to be similar with those previously described. JPS is easy to recommend because it is effective, virtually complication-free, has minimal postoperative restrictions, and is far less invasive and expensive compared to traditional surgical procedures.



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