



Evidence-Based Resource

What Is The Ideal Timing For Orchiopexy?

Evidence Level I

Research has consistently reported that cryptorchidism is associated with poor fertility outcomes. Early orchiopexy may be protective against future infertility, but the optimal timing of this surgery remains controversial. Among the studies that we identified, the overall consensus is that orchiopexy performed in early childhood has the greatest benefits for future fertility. Most of these studies recommend orchiopexy before the age of two, although some have reported the best results when surgery is performed before one year of age. Specifically, an RCT by Kollin (2007) indicated that testicular catch-up growth was greater when orchiopexy was performed at nine months compared to three years of age. In addition, several non-randomized trials have reported greatest fertility (i.e., sperm count in adulthood) when orchiopexy is performed before one year of age (e.g., Kogan 1990, Canavese 2009, Tasian 2009).

The association between timing of orchiopexy and testicular cancer risk is less clear. There have been mixed findings regarding this outcome, with some studies reporting that orchiopexy in childhood is protective against cancer, while other studies report no association. We found that higher-quality studies tended to report a benefit of early orchiopexy. Specifically, findings from a systematic review (Walsh 2007) and several non-randomized trials (e.g., Forman 1994, Pettersson 2007) have indicated that the risk of testicular cancer is lower among patients who underwent orchiopexy before puberty compared with those whose surgery was performed postpubertally.

Another factor to consider when determining the optimal age for orchiopexy is the possibility of spontaneous testicular descent. In a study of 48 newborns with cryptorchidism, Thong (1998) found that 76% of infants achieved spontaneous testicular descent by one year of age. However, Wenzler (2004) found that if the testis was still undescended by two months of age, the chance of spontaneous descent decreased dramatically, with almost no chance of descent past six months of age. Thus, if the testis remains cryptorchid by six months of age, orchiopexy should be performed as soon as possible. This recommendation is consistent with that of a group of Nordic clinical specialists; after conducting a thorough literature review, these specialists reached a consensus that orchiopexy for cryptorchidism should be performed between 6-12 months of age (Ritzen 2007).

In summary, there is an overall consensus that early orchiopexy is beneficial for future fertility and may be protective against the increased risk for testicular malignancy in cryptorchid patients. In particular, optimal testicular function is most likely achieved when the surgery is performed before one year of age.

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The full systematic review can be found [here](#).

Systematic Reviews

Walsh TJ, Dall'Era MA, Croughan MS, Carroll PR, Turek PJ. Prepubertal orchiopexy for cryptorchidism may be associated with lower risk of testicular cancer. *Journal of Urology*. 2007;178(4 Pt 1):1440-6.

Randomized Controlled Trials

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Non-Randomized Trials: Comparison Studies

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Other Study Designs

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