

## Squint – How I Do It

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**Introduction:** Squint is a condition where there is misalignment of the visual axes<sup>[1]</sup>. Common types include esotropia and exotropia while hypertropias are not very common<sup>[1]</sup>. This article seeks to describe how I carry out squint surgeries secondary to either head injuries, cerebral palsies (CP), cerebral visual impairment, cataract or any other cause in my practice.

**Methods:** My first steps involve carrying out general examination of the child's overall appearance, level of alertness during history taking, noting any head posture, and gross ocular alignment. I also generally assess a child with dysmorphic features. I always examine the systems such as the cardiovascular, abdominal, chest, musculoskeletal and central nervous systems. For ocular examination, I usually assess visual acuity using preverbal and verbal techniques as appropriate. I then observe fixation for monofixation or binocularity. In monocular fixation I test for central, steady and maintained fixation or fix and follow gaze. Eccentric fixation is an important sign as this shows that the patient is not fixing with the fovea and vision is in the range of 20/200 or worse. I examine the child or adult appropriately looking for media opacities, refraction, other tests, stereopsis, etc. I refer children to paediatricians for systemic evaluation and invite anaesthetists to examine the child to confirm fitness for surgery. Pre-operatively, I insist the patients use prophylactic topical antibiotics and maintain good personal and facial hygiene. After proper examination and preparation for surgery, children are usually done under general anaesthesia while adults are done under local anaesthesia.

**What I do—**

Small angle squints of 15 to 20 prism esotropia and small angle of 15 to 20 prism exotropia with presence of convergence, I observe every 3 months for a maximum of 9 -12 months. If

constant I leave alone in children. For adults, prisms can be prescribed if available

**Esotropias:-**

Esotropia of 15 to 20 Prism deviation, I observe for 6 to 9 months. If no improvement, the surgical procedure I do is to just disinsert the medial rectus (MR) - using a cul de sac technique of raising the conjunctival flap. For 25 prism diopters (PD) and above up to 50 PD, I do two muscle surgery in both eyes i.e Bilateral medial rectus (BMR) recession. For deviations above 50 PD say 60 PD and above, then I do three muscle surgery i.e. BMR recession and a lateral recuts (LR) resection in the more deviated eye.

**Exotropias-**

Bilateral lateral rectus (BLR) recession is carried out if angle is < 50 PD and if angle is larger, I do same procedure combined with a medial rectus resection in the worse deviating eye. What do I do in special cases that I commonly see (exotropias) e.g. cataracts of more than 1 year. I extract the cataract and in more than 96% of times, the eye becomes realigned, except in cases of undiagnosed pathologies in the posterior segment. Following nerve paralysis/paresis which often arise from head injury, cerebral palsies or convulsions of any origin, I observe for 6 to 12 months. If there is improvement in the angle of deviation then patient or parent is reassured. If no improvement after 9 months and the angle remains constant then I plan for surgery. In paralytic exotropias or esotropias :- I do two muscle surgery on the worse eye. Patients and parents are usually counselled for the possibility of a re-operation due to over or under correction

**Discussion/Conclusion:** I use Helveston' s set of instruments for squint surgery as it makes surgery and assisting easier and faster unlike some other brands of surgical instruments. Bigger lid speculum is better for wider exposure. Double ended spatulated 6.0 vicryl sutures are preferable else I use 2 single sutures. I use Hangback technique in large angle squints of more than 60PD that require posterior re attachment(recessions). Most times, cosmetic outcome is usually satisfactory<sup>[2]</sup>.

Disclosure: I hereby declare that there is no financial or conflict of interest in the use of Helveston's instruments

**References**

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2. Edelman PM. Functional benefits of adult strabismus surgery. Am Orthopt J. 2010; 60:43-47.