

# Evaluation of two types of treatment for adolescent patients with protrusion of lower jaw and constriction of upper jaw

ACTRN12622000310763

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Status	RECRUITING
Sponsor	Universiti Sains Malaysia
Enrollment	42 participants

## Plain Language Summary

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Some children have a dental condition where the lower jaw protrudes further forward than the upper jaw, combined with a narrow upper jaw — this is called a Class III malocclusion. It can affect chewing, speaking, and confidence. Treating this while children are still growing gives the best chance of good results without the need for later surgery.

This Malaysian study compares two orthodontic devices used to correct this alignment problem in children aged 12–15. Both devices work by helping the upper jaw grow forward and widen, but they use different mechanisms. Researchers will measure changes to the jaw bones and teeth using X-rays and clinical assessments to see which device is more effective.

You may be eligible if you are a Malaysian patient aged 12–15, have permanent adult teeth, have been diagnosed with a Class III jaw relationship with specific bone measurements, and have not had previous orthodontic treatment. Children with craniofacial syndromes, cleft palate, missing teeth, or asymmetric jaws are not eligible.

## Key Eligibility Criteria

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### Inclusion (11)

- (1) Angle's class III malocclusion
- (2) Anterior crossbite on two teeth or more or an edge-to-edge bite with or without an anterior shift of the mandible during the closure
- (3) Skeletal class III relationship judged clinically and confirmed radiographically ( $-4 < ANB < +1$ )
- (4) Normal inclination of the lower incisors with an incisor mandibular plane angle (IMPA) not exceeding  $100^\circ$  and not less than  $85^\circ$
- (5) An indication for maxillary expansion (maxillary constriction)

... and 6 more (see full listing online)

### Exclusion (7)

- (1) Skeletal class III relationship caused predominantly by maxillary deficiency (SNA angle should have been less than  $78^\circ$  with a normal SNB angle)
- (2) Severe skeletal class III resulting primarily from mandibular prognathism (ANB less than  $-4^\circ$  with no functional shift on closure)
- (3) Patients with diseases that prevent the application of mini-implants (e.g., osteoporosis – treated with cortisone and its derivatives- treated with radiation)
- (4) A convergence between the roots of the canine and first premolar assessed radiographically
- (5) Facial asymmetry (more than 2 mm of deviation of the mandibular midline from the facial midline)

... and 2 more (see full listing online)

## Locations (2 total)

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— Syrian Arab Republic

Syrian Arab Republic  
<https://www.anzctr.org.au/Trial/Registration/TrialReview.aspx?ACTRN=ACTRN12622000310763>

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