

Convergence

- Both eyes adduct independent with each other
- Accompanies accommodation ([AC/A ratio](#))
- Used to maintain fixation on near targets
- Quantified by measuring convergence amplitudes and near point of convergence
- Dysfunctional convergence is seen in Exophoria and Exotropia
 - When accompanies exophoria, sensory fusion may be able to be strengthened by convergence exercises
- [Convergence insufficiency](#) can occur without strabismus

Convergence Amplitudes

- Testing requires sensory fusion
- With a fixation target at near and distance with a 20/40 target, look through progressively larger base out prisms until diplopia occurs.
 - The break point is the prism value where diplopia occurs
 - The recovery point is the prism value where sensory fusion is re-established
- Normal measurements for break point:
 - Near: 30 Δ to 40 Δ
 - Distance: 20 Δ to 30 Δ

Near Point of Convergence

- Point in space directly in front of the eyes where maximal convergence is used
- Practically defined as the distance from nose where diplopia occurs
- Can use a Prince rule or any ruler with an accommodative target to measure
- Normal near point:
 - 4cm to 10cm

Prince Rule



Photo courtesy [AAO](#)

[strabismus](#), [convergence](#)

From:

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Last update: **2025/02/19 23:59**

