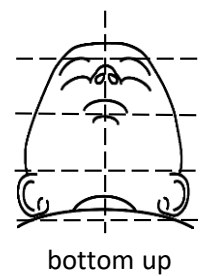
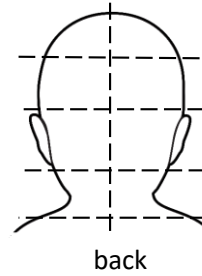
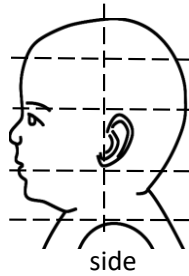
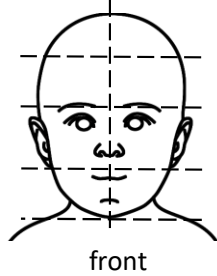
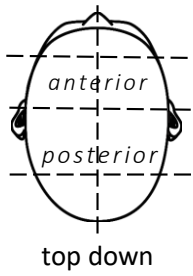


## Screen for head, face, and neck symmetry (*visualize; measure with calipers*)

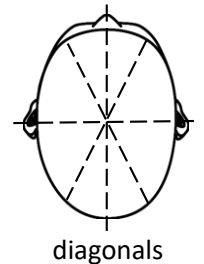
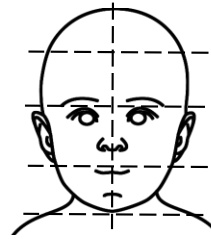
1. **PROPORTION** - **Cranial Index (CI)**  $Width \div Length \times 100$ ; also called *Cephalic Ratio*
2. **ALIGNMENT** - **Cranial Vault Asymmetry (CVA)** also called *Diagonal Difference*



Note: illustrations do not depict all possible combinations of asymmetry.

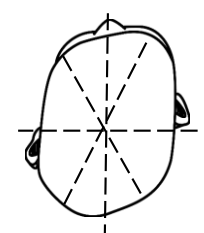
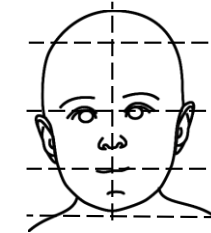
### Normocephaly

- **CI: >76% to <90%**; proportion within normal limits (WNL); skull quadrants are relatively equal
- **CVA: 0mm to 5mm**; diagonal difference WNL; cranial and facial landmarks appear even, aligned



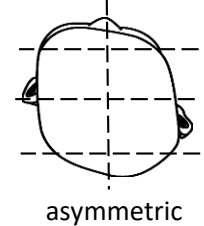
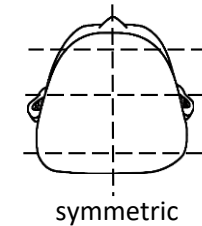
### Plagiocephaly

- **CI: >76% to <90%**; **CVA: >5mm**; severe >10mm
- skull flattening in one area (*anterior or posterior*) with a compensatory bulge (*bossing*) in another area
- rule out craniosynostosis, facial bone or neck muscle involvement



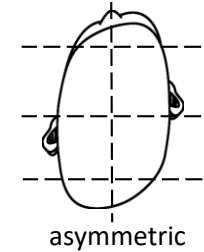
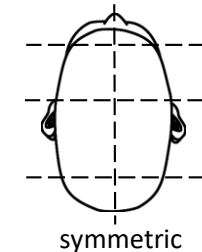
### Brachycephaly

- **CI: >90%**; disproportional; short wide skull; may include occipital flattening; parietal/temporal widening
- may be **symmetric** (CVA WNL), or **asymmetric** (CVA >5mm)
- rule out suture synostosis (*coronal, lambdoid*)



### Dolichocephaly (*called scaphocephaly before ICD-10*)

- **CI: <76%**; disproportional; elongated, narrow skull
- may be **symmetric** (CVA WNL), or **asymmetric** (CVA >5mm)
- rule out suture synostosis (*metopic, sagittal*)



### Torticollis, or neck muscle asymmetry

- neck muscle shortened, tightened from injury (*congenital or acquired*)
- often involves sternocleidomastoid muscle (SCM) or trapezius muscle
- highly correlated with plagiocephaly; usually treated with exercise
- may include weak neck muscles; limited range of motion; head tilt; positional preference; shoulder hike on involved side; face rotation to uninvolved side

