

# Brachycephaly

It is known as [flat head syndrome](#), and results from premature fusion of the [coronal sutures](#) or from external deformation (see [plagiocephaly](#)).

This feature can be seen in Down syndrome.

In anthropology, human populations have been characterized as either dolichocephalic (long headed), mesaticephalic (moderate headed), or brachycephalic (short headed). The usefulness of the cephalic index was questioned by Giuseppe Sergi, who argued that cranial morphology provided a better means to model racial ancestry.

The incidence of brachycephaly in people has increased since the advent of sudden infant death syndrome recommendations for parents to keep their babies on their backs.

It is considered a cosmetic problem.

Many pediatricians remain unaware of the issue and possible treatments. Treatments include regular prone repositioning of babies ("tummy time").

There are also cases of brachycephaly associated with plagiocephaly, this deformity occurs when there is a combination of brachycephaly and plagiocephaly present. Brachycephaly with plagiocephaly is positional and has become more prevalent since the "Back to Sleep" Campaign. The Back to Sleep campaign began in 1994 as a way to educate parents, caregivers, and Healthcare providers about ways to reduce the risk for sudden infant death syndrome (SIDS). The campaign was named for its recommendation to place healthy babies on their backs to sleep. Placing babies on their backs to sleep reduces the risk for SIDS, also known as "cot death" or "crib death." This campaign has been successful in promoting infant back sleeping and other risk-reduction strategies to parents, family members, child care providers, health professionals, and all other caregivers of infants, at a cost of increasing the incidence of this deformation of the head.

Brachycephaly also describes a developmentally normal type of skull with a high cephalic index, such as in snub-nosed breeds of dog such pugs and bulldogs or cats such as the Persian, Exotic and Himalayan.

Brachycephaly can be corrected with a cranial remolding orthoses (helmet) which provide painless total contact over the prominent areas of the skull and leave voids over the flattened areas to provide a pathway for more symmetrical skull growth. Treatment generally takes 3–4 months, but varies depending on the infant's age and severity of the cranial asymmetry.

However studies by scientists in the Netherlands have found there was no significant difference over time between infants treated with helmets and infants left untreated. All parents of infants treated with helmets confirmed negative side effects including skin irritation and sweating.

This study focused only on patients with mild to moderate cases, the participation rate was only 21%, and there was a 73% reporting of fitting issues, calling into question the validity of the study. Incorrectly fit devices cannot be expected to yield results. Additionally, independent published research that examined the effectiveness of helmet therapy conclude that as many as 95% of patients demonstrate an improvement in head shape symmetry following helmet therapy, and the American Orthotics and Prosthetics Association (AOPA) has serious concerns about the relevance and validity of this study.

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Last update: **2024/06/07 02:55**

