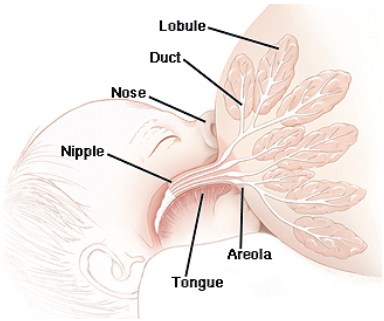
Project for BME MSc students

Exploring the Geometry of the Free Nipple-Areola Complex of Lactating Breasts



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Overview:
This study is designed to explore the free geometry of the nipple-areola complex that directly affects the success of efficient breastfeeding. The first phase of breastfeeding requires latch-on in which the infant generates a full contact between his tongue, lips and the breast to seal off its oral cavity from the external environment and convert the nipple/areola into a long teat within his oral cavity. The outcome of this phase directly depends on the free geometry and size of the nipple-areola complex, but these data is missing in the literature. The study aims to develop **image processing tools** to analyze **pictures** of the nipple-areola region acquired by a lactation professional with a custom designed jig (see picture below) and a digital camera. The analysis must lead to the extraction of the dimensions of the free nipple-areola complex. We will study mothers of different body size, as well as different ethnic and racial groups.

custom designed jig for
image acquisitions