confirm that cold stimulation of the palate induced by gobbling up ice cream more than doubles the likelihood of developing ice cream headache among middle school students. In contrast to previous studies, our results suggest that ice cream headache can be induced in cold weather even in subjects who eat their ice cream at a slow pace. The lifetime prevalence of ice cream headache was also considerably higher than what was previously reported.

1   Raskin NH. *Headache.* 2nd ed. London: Churchill Livingstone, 1988.
2   Smith RO. Ice cream headache. In: Vinken PJ, Bruyn GW, eds. *Handbook of clinical neurology.* Vol 5. Chichester: John Wiley, 1968:188-91.

Sex—can you get it right?

Jonathan E C Round, Maesha Deheragoda

Neonatal Intensive Care Unit, Guy's Hospital, London SE1 9RT
Jonathan E C Round
specialist registrar
Maesha Deheragoda
senior house officer
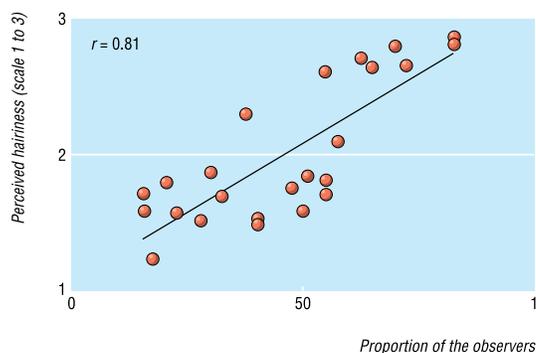
Correspondence to:
J E C Round
jround@doctors.org.uk

Neonatologists often get the sex of their patients wrong. A review of the literature on identifying sex from facial appearances yielded one small study from Nashville, Tennessee.[1] The low level of success (60%) found by the study suggests either that sex specific characteristics are inconsistent or that adults do not notice them. We wondered whether newborn babies' sex could be determined from their facial characteristics; whether particular facial characteristics, such as delicacy, were associated with the attribution of sex; and whether adults' degree of contact with neonates increased accuracy. The study was approved by the research and ethics committee at Guy's Hospital.

Relation between proportion of 53 observers who identified baby in photo (n=24) as female, and hairiness rating of baby

Participants, methods, and results

Thirty babies born at term were enrolled consecutively on the postnatal ward at Guy's Hospital. Unwell babies and babies who were not fully Afro-Caribbean or white were excluded. The babies were wrapped, with the face left exposed, and photographed. Eight photographs of Afro-Caribbean babies and 16 of white babies were randomly selected from the 30, with equal numbers of boys and girls in each sample. The photographs were shown to 53 adults, who were also asked to complete a questionnaire on the babies' characteristics. Of these observers, 21 were men. Twelve were paediatricians, 14 were paediatric or neonatal nurses, and 27 were not health workers. Forty were parents. The observers guessed the sex of each baby from the photographs and then rated, on scales from 1 to 3, the babies' hairiness, delicateness of features, coarseness of features, and chubbiness.

We used Student's *t* test to compare the results for each observer and baby. This showed that the observations were independent. Among all the adults, the mean number of babies whose sex was correctly identified was 13.3 (95% confidence interval 12.7 to 13.9), or 55% of babies, a significantly better proportion than expected by chance (P<0.001). The nurses correctly identified 14.3 (13.3 to 15.3) babies, or 59%, and thus were more successful than the paediatricians (12.1 (10.9 to 13.3); P<0.02). Non-health workers identified 13.3 babies correctly (12.6 to 14.0; not significant). There was no significant difference between the scores of women (13.6 (12.9 to 14.3)) and men (12.8 (11.9 to 13.7)) or between those of parents (13.4 (12.8 to 14.0)) and non-parents (12.9 (11.6 to 14.2)).

Overall, observers thought that 58% of the babies were boys. Babies thought to be girls were rated hairier (figure). Observers' identification of sex did not correlate with their ratings of chubbiness or coarseness or delicateness of features or with the babies' gestation or birth weight. There was no relation between the babies' actual sex and any of the variables, though the results do suggest a trend towards girls being hairier than boys (hairiness rating 2.1 (1.8 to 2.4) *v* 1.9 (1.6 to 2.2)).

Afro-Caribbean babies were more often identified by the observers as girls and were rated as hairier than white babies, but differences were not significant. Only 15% of observers correctly guessed the sex of one white girl—this baby had the sixth lowest hairiness rating but was similar in all other characteristics to the other babies. More than four fifths of observers (83%) correctly guessed the sex of one white boy, the least hairy baby. He weighed much less than the mean and had a higher than average delicateness rating.

Comment

The proportion of babies whose sex was correctly identified by the observers, on the basis of facial char-

acteristics, was higher than that expected by chance. Distinguishing features that are present in newborns' faces allow adults to identify the babies' sex, but these cues are subtle and easily missed or inconsistent. Accuracy increases with exposure to newborns, as seen with the nurses in our study. Perhaps people who have more contact with babies are more able to see differences between babies. Preconceptions relating to hairiness may influence people's assumption of neonates' sex. Our sample size did not allow us to determine whether girls really are hairier than boys. It could be concluded that the major clue to a baby's sex is its hairiness; perhaps experienced observers subconsciously take note of hairiness and so are better at identifying sex. Overall,

the observers in our study could identify the babies' sex from their faces—but why couldn't the paediatricians get it right?

1 Porter RH, Cernoch JM, Balogh RD. Recognition of neonates by facial-visual characteristics. *Pediatrics* 1984;74:501-4.

Shapely centrefolds? Temporal change in body measures: trend analysis

Martin Voracek, Maryanne L Fisher

Body mass index (weight (kg)/(height (m)^2) and waist:hip ratio in women are linked to fertility, endocrine status, risk of major diseases, and longevity.[1–3] Health related optimums for body mass index (20 or slightly lower[2]) and waist:hip ratio (0.7 or slightly lower[3]) are also maximally sexually attractive to men.[1 3] According to evolutionary research, these attractiveness optimums reflect evolved optimal design and thus should not be subject to temporal change.[3]

This assumption is not consonant with the decline in the optimally attractive body mass index that has occurred in the past few decades, as exemplified by fashion models depicted in the media. With increases in the incidence of eating disorders in the general population of women, this decline is a cause for concern.[4 5] In contrast, Singh has reported evidence for the temporal stability of the maximally attractive waist:hip ratio, on the basis of analysis of the waist:hip ratios of centrefold models in *Playboy*.[3] However, Singh based this conclusion, as is the case for other studies pertaining to body measurements of *Playboy* centrefolds,[4] on a partial sample.

Subjects, methods, and results

We looked at the trends in *Playboy* centrefold models' body measurements by analysing 577 consecutive monthly issues, from the magazine's inception in December 1953 to December 2001. We extracted centrefolds' anthropometric data: height, weight, and measurements for bust, waist, and hip (n=532-543, owing to missing data). We calculated composite measures from these data: body mass index, waist:hip ratio, waist:bust ratio, bust:hip ratio, and an androgyny index (suggested by a reviewer)—waist/((hip*bust)**0.5). We correlated individual measures with magazine issue number (1 to 577).

All measures except weight, which was nearly stable (r= – 0.02) and hence may indicate a stable attractiveness cue, showed significant temporal change (if not

Changing trends in body shape: Rubens's wife (1636-8); Marilyn Monroe (1952); Eva Herzigova (2001)

KUNSTHISTORISCHES MUSEUM, VIENNA/BAL; KOBAL; DMW/REX

Department of Psychoanalysis and Psychotherapy, Statistics and Documentation Branch, University of Vienna Medical School, AKH/ Währinger Gürtel 18-20, A-1090 Wien, Austria
Martin Voracek
research resident

Department of Psychology, York University, 4700 Keele Street, Toronto, ON M3J 1P3, Canada
Maryanne L Fisher
PhD candidate

Correspondence to: M Voracek martin.voracek@ akh-wien.ac.at

specified, P < 0.001). Whereas the increase in height (r=0.36) merely reflects the well known secular acceleration trend, and an increase in the age of models (r=0.22) was not relevant to this investigation, all other changes call for attention. Over time, bust size (r= – 0.36) and hip size (r= – 0.29) decreased, while waist size increased (r=0.27). Composite measures of body shape captured the same trends: body mass index (r= – 0.46) and bust:hip ratio (r= – 0.13; P=0.002) decreased, while waist:hip ratio (r=0.47), waist:bust ratio (r=0.48), and androgyny index (r=0.50) increased.

Comment

The data suggest notable temporal trends in measures of body shape in *Playboy* centrefold models (figure). The typical body mass index of *Playboy* centrefolds has further descended below corresponding population levels, whereas their typical waist:hip ratio now approaches population levels. In sum, centrefold