



CWHS

Data Points

RESULTS FROM THE 2008 CALIFORNIA WOMEN'S HEALTH SURVEY

Age at first menstruation (menarche) is a well-defined marker of reproductive maturation in adolescent females. Recent reports indicate that puberty (defined by breast development) appears to be occurring at younger ages.^{1,2} The mean age at first menarche appears to have declined by about one year during the first half of the 20th century and may be continuing, but at a slower rate, to a median age of 12.4 years currently in the U.S.^{2,3} Early menarche, or puberty, is associated with shorter adult height and a number of problems, including risky behaviors, increased risk of teen pregnancy, breast cancer, metabolic disorders, and possibly infertility.⁴ Onset of puberty is related to larger body size, so the increasing rate of childhood obesity likely plays a role in earlier age at puberty.⁵ Reproductive development may also be affected by exposure to chemicals that mimic or modify hormone action.⁵

In the 2008 California Women's Health Survey (CWHS), 4,122 California women ages 18 and older (83 percent of those surveyed) responded to the following question, "How old were you when you had your first menstrual period?" The responses were categorized for age at menarche as younger age (< 12 years), 12 or 13 years, and older age (> 13 years). The proportions of respondents in these age categories were compared by current age, race/ethnicity, and foreign-born versus those born in this country, using the Chi-square test to assess statistical significance. Responses were weighted by age and race/ethnicity to reflect the 2000

California adult female population. These weighted proportions were also compared to the 1997 survey responses (without statistical testing). Mean age at menarche was also examined by demographic categories.

Overall, 18.5 percent of women reported being younger than age 12 and 28.7 percent reported being older than age 13 when they had their first menstrual period. The mean age for first menstrual period was 12.8 (\pm 1.6) years.

- The youngest women (ages 18-24) were more likely to report younger age at menarche (23.5 percent) than the oldest women (65 or older, 16.0 percent), but the overall distribution did not vary significantly by age group. Similarly, the youngest women (ages 18-24) had a lower mean age at menarche (12.5 years) than the oldest women (12.9 years).
- African American/Black women (25.3 percent) were most likely to report younger age at menarche (see Figure 1), followed by Hispanic women (21.0 percent) and White women (18.2 percent), with Asian/Other women being least likely (13.7 percent; $P < .001$). Mean age at menarche followed a similar pattern by race/ethnicity, with African Americans/Blacks being the youngest (12.6 years) and Asians/Others the oldest (13.1 years).
- Women born in the United States were significantly more likely to report younger age at menarche

Age at Menarche (or First Menses) Among California Women, 2008, by Demographic Characteristics and Compared to 1997

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Public Health Message: *Consistent with prior surveys³ and higher rates of adverse health outcomes, African American/Black women were most likely to report a younger age at menarche (< 12 years). The youngest women (ages 18-24) also had the lowest mean age at menarche, potentially reflecting a birth cohort effect. Variations by age and race/ethnicity in risk factors for early menarche such as obesity, diet, physical activity, and chemical exposures are important to identify, because some of the factors may be modifiable with appropriate education and policies.*

Age at Menarche (or First Menses) Among California Women, 2008, by Demographic Characteristics and Compared to 1997

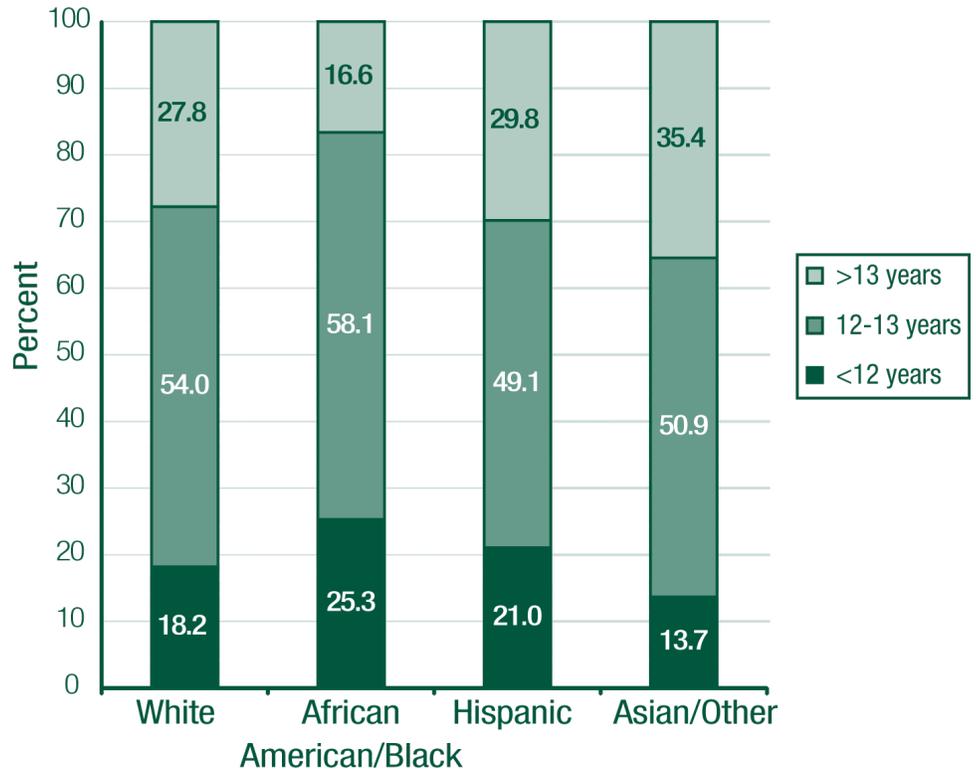
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(19.4 percent) than were foreign-born women (15.9 percent; $P < .001$), who comprised more than one quarter of the sample (see Figure 2).

Comparing over the last decade, the percentage of women with a younger age at menarche in 1997 (18.8 percent) was very similar to 2008 (18.5 percent), as was the mean age (12.8 years). African American/Black women had a greater increase than the general population in the proportion reporting younger age at menarche (from 19.1 percent in 1997 to 25.3 percent in 2008).

Figure 1

Age at Menarche By Race/Ethnicity, 2008



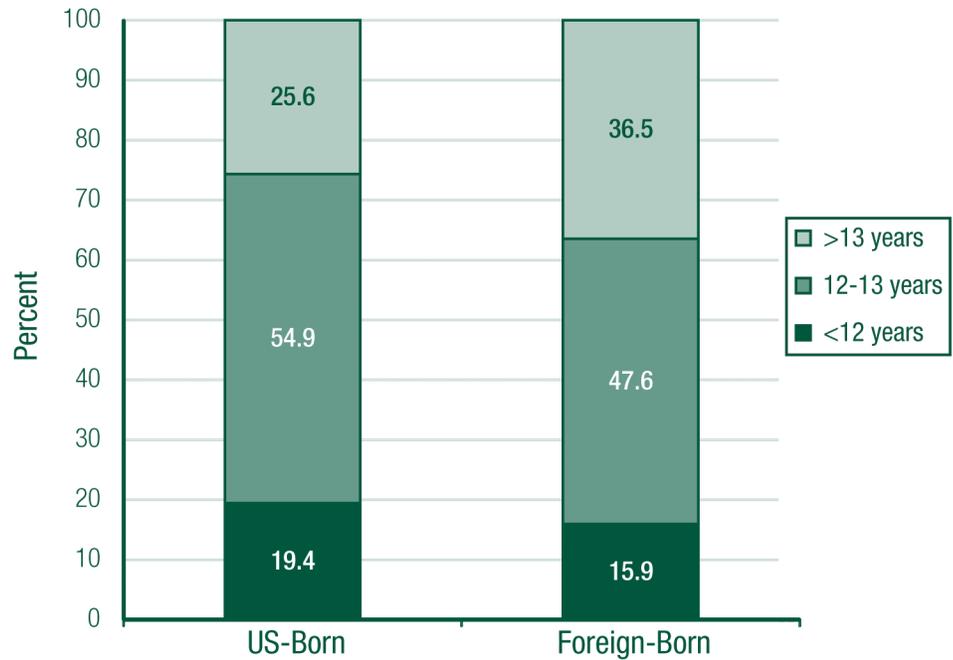
Source: California Women’s Health Survey, 2008

Age at Menarche (or First Menses) Among California Women, 2008, by Demographic Characteristics and Compared to 1997

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Figure 2

Age at Menarche By Country of Birth, 2008



Source: California Women's Health Survey, 2008

- 1 Herman-Giddens ME, Slora EJ, Wasserman RC., Bourdony, CJ., Bhapkar, MV, Koch, GG, Hasemeier C M. Secondary sexual characteristics and menses in young girls seen in office practice: a study from the Pediatric Research in Office Settings Network. *Pediatrics*. 1997;99(4):505-512.
- 2 Euling SY, Herman-Giddens ME, Lee PA, et al. Examination of US puberty-timing data from 1940 to 1994 for secular trends: panel findings. *Pediatrics*. 2008;121 Suppl 3:S172-S191.
- 3 McDowell MA, Brody DJ, Hughes JP. Has age at menarche changed? Results from the National Health and Nutrition Examination Survey (NHANES) 1999-2004. *J Adolesc Health*. 2007; 40(3):227-231.
- 4 Golub MS, Collman GW, Foster PM, et al. Public health implications of altered puberty timing. *Pediatrics*. 2008;121 Suppl 3:S218-S230.
- 5 Euling SY, Selevan SG, Pescovitz, OH, Skakkebaek NE. Role of environmental factors in the timing of puberty. *Pediatrics*. 2008;121 Suppl 3:S167-S171.

Submitted by: Gayle Windham, M.S.P.H., Ph.D. and Cathyn Fan, M.P.H., California Department of Public Health, Division of Environmental and Occupational Disease Control, (510) 620-3638, Gayle.Windham@cdph.ca.gov