

Age, Season at Menarche, Family Factors and Adult Body Traits in Girls from Yucatan, Mexico (Comparative Study)

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ABSTRACT A total of 1010 girls and 529 of their mothers were examined in the port town of Progreso, Yucatan, Mexico in June-September 1993. Investigations included living conditions, year and season of birth and menarche using a retrospective method, some characteristics of the menstrual cycle and 4 somatic variable Data form Progreso were compared with Polish examination and data of the Fels Longitudinal Study in USA. The acceleration rate of maturation in Progreso girls is 0.16 a year per decade. Girls who matured earlier were shorter in young adult age (30), but heavier and fatter. They follow this position also in age 50-60. Girls matured more frequently than randomly in the month of their birth. This was especially true for girls who were born in the dry and hot days of April and May. In girls born during the rainy season acceleration of maturation in relation to month of birth was observed. In girls born in other months rather retardation of maturation took place. Shift in an expected menarche month was related to environmental stress. The main stimulating factor is probably solar radiation, and a mechanism related to increase of vitamin and hormonal level in organism. Sensitivity of girls manifested by occurrence of menarche (and maybe by more general symptoms) was dependent on season of birth. It might be related to the season of conception and pregnancy.