4.2 (1.0) years.

DISCUSSION

Our data show that in the last decade of the twentieth century, middle to upper class Athenian schoolboys entered puberty at a mean age of 10.3 years. In a study carried out in Athens in 1968 in which testicular size and not genitalia Tanner staging classification was used, it was found that testicular enlargement began between the 10th and 11th year of age.\(^8\) In another study on the sexual maturation of Athenian boys carried out in 1978, a testicular volume of 4ml was reported to occur at a mean age of 10.8 years.\(^9\) It has recently been reported that in the 1990s the mean age at pubertal stage G2 of mainly middle class Athenian boys was 11.0 years.\(^10\) All the aforementioned studies were cross-sectional and the ages could be at least 0.5 year earlier. The lower age at onset to puberty observed in the present study may be due to its longitudinal nature and possibly to the higher socioeconomic class of the boys, or both,\(^11,12\) rather than to a secular trend.

The onset of puberty in our study is earlier than that reported in most other similar studies of Caucasian populations, both cross-sectional and longitudinal.\(^4,5,13-17\) However, the recent studies from the American NHANES III showed that in non-Hispanic white boys median age at G2 was 10.03 years,\(^18\) while in European studies (East Germany) G2 was at 10.8 years.\(^19\) The % of the final height achieved at the age of peak height velocity is higher than that indicated by Greulich and Pyle data.\(^20\) No valid interpretation can be given for this difference but it could be attributed to genetic factors or a secular trend.

In the present study pubic hair developed significantly earlier than in other American and European populations.\(^21,22\) This could be due to genetic reasons or secular trend.

During development there is an increase in total body fat, as is shown by the increase in BMI, after the age of 6 years until maturity.\(^23\) However, during male puberty there is a decrease in percent body fat due to the increase of lean body mass as a result of the androgen effect.\(^24,25\) The BMI values in the different pubertal stages, at PHV and at final height are reported for the first time and, although they do not accurately reflect body fat mass,\(^26\) they demonstrate an interesting evolution of body mass related to the various facets of the pubertal process.

We present a longitudinal study on pubertal maturation of Greek boys. Since longitudinal data are somewhat sparse especially for males, the present data could be useful in delineating prognosis for puberty evolution and for final height in boys.

REFERENCES

3. Largo RH, Prader A, 1983 Pubertal development in Swiss