INTRODUCTION
Elite adult athletes have physical and physiological characteristics specifically suited to their sport. However, it is not clear whether the observed adult differences arise because of training or whether the sport selects the individual with the appropriate characteristics. Tanner (1964) studying the physique of Olympic athletes concluded that athletes were born and made, suggesting that the required body structure for each sport had to be present at birth and that the required training then had to be undertaken in order to achieve sporting success.

GROWTH AND BIOLOGICAL MATURATION
Within and between members of the same sex there are considerable variations in the timing and tempo of a child's growth and development. Growth refers to increases in the size of the body or its parts, and development refers to the tempo and timing of progress toward the mature adult state. The early maturing child is characterised by having advanced biological age (BA) for their chronological age (CA). Therefore, using CA to accurately index physical potential causes problems as it does not take into account maturational age. As most competition is CA banded concerns arise from the use of age related competition results to identify talent. Although obviously selected for skill in their respective sports, it has been suggested that their size and physique are also important selection criteria (Beunen & Malina 1996). Retrospective studies of elite adult athletes have suggested that there is an overwhelming bias in favour of sport for the very tall (Khosla 1983). Although it has been suggested that training at a young age could effect growth, most recent studies suggest otherwise. The tendency to be taller than average from an early age suggests that body size is likely to have influenced selection into that specific sport, which in turn is likely to have influenced performance.

INFLUENCE OF BIRTH DATE
It has also been suggested that chronological aged grouped youth competition not only gives an advantage to the early mature but also to the individual born during the earliest part of the selection year (Brewer et al 1995, Baxter-Jones 1995).

LUNG GROWTH
Numerous studies in adult athletes have shown that athletes have larger pulmonary function values than their height, age and sex matched peers. In particular they have been found to demonstrate larger lung volumes. In general, children involved in high levels of physical activity have also been shown to have larger lung volumes than untrained children at comparable ages and body size (McKay et al. 1983). Young swimmers undergoing intensive training have been shown to have larger lung volumes than other similarly aged land-based athletes and non-athletes. To what extent these differences are the consequence of training and to what extent they are due to natural endowment is still under debate (Cordain & Stager 1988, Bloomfield et al. 1990)

AEROBIC POWER DEVELOPMENT
Current research suggests that the improvements in maximal aerobic power which occur as a child ages are an expression of both increased body size and improved function (Rowland 1990). Analysis of aerobic power development 'normalised' for body size (i.e. maximal oxygen uptake relative to body mass) has shown an absence of change in males, whilst in females a decrease with age. In females this is thought to reflect an increase in adiposity during puberty and also perhaps cultural factors inhibiting high intensity physical activity. The development of high levels of aerobic power in young adults has thus been related to both the influence of genetic endowment and physical activity during the growth years. Again the results from adult populations do not answer the question, are these differences between athletes inborn or acquired by training?
THE TOYA STUDY

The above issues have been addressed using data collected from a longitudinal study of the growth and development of young British athletes (The Training of Young Athletes (TOYA) study). In total 453 subjects were recruited (222 females and 231 males), in five age cohorts (8, 10, 12, 14 and 16), from four sports: tennis, soccer, swimming and gymnastics. Body height, body mass, pubertal development, and a number of other anthropometric variables were measured annually for 3 consecutive years. Information regarding, menarcheal age, weekly training hours and socio-economic class were obtained using semi-structured interview questionnaires. When compared to height and weight standard charts swimmers had higher than predicted values for both height and weight, whereas gymnasts were found to be smaller than reported norms. Although the mean age of menarche found in our sample was older than the previously reported UK reference value (13.00 yr.), further analysis taking maternal menarcheal age into account suggested that menarche was intrinsically late rather than delayed. This was also true for male gymnasts. Analysis of lung function data (Forced Vital Capacity (FVC)), indicated that FVC of athletes at 10 years of age was already significantly greater than non-athletes. However, the increase in the rate of lung growth was proportional to body size in both the athlete and non-athletes. These results suggest that physical activity was not influence lung growth and that the observed differences between the groups reflect a genetic predisposition towards superior lung function status in the athletes. The results with regards aerobic power development were consistent with previous longitudinal results indicating increases in maximal oxygen uptake with increasing age and physical maturity. However, the results also extends previously reported results by demonstrating individual growth trajectories of aerobic power in the different sports studied, suggesting that the type of training does indeed influence aerobic power development (Baxter-Jones et al 1993).

CONCLUSION

The data presented suggests that within this specific sample sports specific selection was operating, and that the observed differences in most physiological parameters were likely the result of selection rather than an affect of training. This suggests that these particular athletes were indeed born to win.

REFERENCES

ROWLAND, T.W., Developmental aspects of physiological functions relating to aerobic power in children. Sports Medicine, 10,255-266,1990