

Genetic Determinism – Endurance Athletes

Background:

In 1999, scientists reported that a particular variant of the angiotensin-converting enzyme (ACE) gene was associated with superior physical endurance. The variant, known as the ACE insertion polymorphism, was found to be present in a higher proportion of elite endurance athletes, especially long distance runners, than in the general population.

Vignette - A:

Marathon University is offering full-tuition scholarships and a guaranteed spot on the varsity track team to high-school sophomores who “pass” a genetic test. If the parents sign a consent form, University doctors will screen them for the ACE insertion polymorphism.

Discussion points:

Is it likely that a single gene determines physical endurance?

Are other genes likely to be important?

What other factors determine whether a child will grow up to be an elite endurance athlete?

Should parents be allowed to use genetic information to make decisions that will limit their children’s choices in adulthood?

What else should MU do to if it is concerned about the well being of the future student-athlete?