

ATHLETE PHYSIQUE AND SPORT

An athlete's physique is made up of his or her unique bone structure, musculature, and body fat. How the body builds muscle and where it puts on fat is primarily determined by genetics. While it is possible to alter the body's muscle mass and overall fat mass to a certain extent, there is considerable risk associated with attempts to override an athlete's genetic physique.

How does a coach or athlete know what their genetic physique is?

- Most athletes, especially at the elite level have largely pre-selected themselves for their particular sport based on their physiological, mental, and physical attributes—which includes their genetic physique. However, an athlete's physique will change during puberty and their new body type may no longer be suited to a particular sport.
- The training and dietary regimes that are essential for successfully rising to a high-performance level, develops in most athletes a training physique that is at, or very close to the limits of their genetic potential.

What are the risks of trying to change an athlete's physique beyond their genetic potential?

- They include: overtraining and injury, disordered eating, drug use, poor body image, sense of failure or more severe psychological problems, hormonal pathologies, reduced immunity, and malnutrition.
- These risks each lead to decline in performance and can seriously compromise the athlete's immediate and long-term health.

What can a coach do to help optimize the physique of an athlete with high potential?

- Address all other ways of improving athlete performance through training methods, appropriate diet, and optimal recovery.
- If minor adjustments are still warranted, the athlete should consult their Canadian Sport Centre dietitian for guidance on changes to their diet and exercise regime that won't sacrifice health and performance.

Athletes will trust their bodies if the training focus is on improving conditioning and mental skills rather than altering shape or weight.

"Nobody gives gold medals for being skinny"

Dr. Louise Burke, Australian Institute of Sport

SNAC Sport Nutrition Advisory Committee
Comité consultatif sur la nutrition sportive

