

- Note that the opinions expressed within the abstracts and presentations are those of the authors/presenters alone and do not necessarily reflect the opinions of WADA.

Effort, talent and fair play

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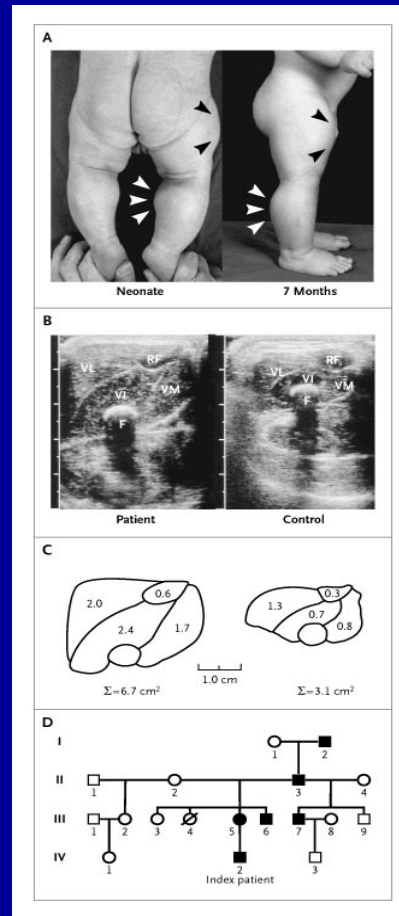
CENTRE FOR BIOETHICS
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Photographs of the Child at the Ages of Six Days and Seven Months (Panel A), Ultrasonograms (Panel B) and Morphometric Analysis (Panel C) of the Muscles of the Patient and a Control Infant, and the Patient's Pedigree (Panel D)

Myostatin Mutation
Associated with
Gross Muscle
Hypertrophy in a
Child

Schuelke, M. et al. N Engl J
Med 2004;350:2682-2688



The arrowheads in
Panel A indicate
the protruding
muscles of the
patient's thigh and
calf



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Now six years of age

- Normal development, no associated diseases (e.g. of the heart)
- Not only increased muscle bulk but also increased strength (he was and still is stronger than his peers)

(Markus Schülke, personal communication Nov. 2005)

If this happens naturally...

- Will there be a number of myostatin-gene polymorphisms that can be identified in selecting individuals more likely to become successful athletes? (McNally 2004)
- Maybe, but what does it take to become a successful athlete?

If this happens naturally...

- Why not allow gene doping?
- Wouldn't it be fair to adjust for natural inequalities - a variant of the fair innings argument applied to Sport?

The culture of sport

Sport activities appreciate and evaluate effort and natural talent

Effort and Talent in balance

Poor talent may (within limits) be compensated by more effort and improved technique

Some talents lack the "winners instinct" and never make it

We appreciate the underdog

The "sport phenotype" is diverse and complex

The culture of sport

- Has always accepted and appreciated "natural selection" of talents (A long-distance runner may not be fit to be a football player for lack of good ball handling)
- Natural variation of talent is intrinsic to sport (If I am not fit I go for the violin or for ethics)
- New types of sport have developed that appreciates natural talents

Equal opportunities?

- Fairness in the sense of equal opportunities is not part of the culture of sport
- Equal access for children to try different kinds of sport, or access motivated by public health concerns is a different matter

The culture of sport

- Fair distribution of talent seems to be alien to sport but,
- There is a notion of fair innings: to get one's [fair] shot at the title/championship
- E.g. Women do not compete with men, and 15-year olds not with 25-year olds

Fair innings

- There are people with advantages we know nothing about - and that we don't want to know about - but there have been some concerns on fair innings, e.g. XXY
- Limits may also be set for pragmatic reasons, e.g. a sufficient number of competitors, a good match, etc.

Natural variation is mostly self-regulating

- People with extreme gene mutations will not become successful athletes, in 'nature' they might not even have survived

The limits of genetic screening

- One has to screen for many characteristics in order to find the potentially successful athletes, due to the balance between talent and effort
- We do not yet know how to screen for "winners instinct"

Gene doping for improving talent and level of effort

- There seems to be an opening for fair innings. Does this imply an opening, however small, for gene doping to 'sneak' in?
- In principle, the answer is yes, the rules could include this, but should they?

The phenotype roulette

- A natural phenotype is the result of a delicate balance in order to master:
 1. Genetic programs (expression, transcription...)
 2. Epigenetic instabilities
 3. Biological chance (stochastic processes)
 4. Environmental challenges

For safety reasons

- For any athlete, close monitoring is essential for balance between health and achievement
- This is difficult enough without gene doping
- Delivery, expression and safety of gene transfer is still difficult to meet

For safety reasons

- Protect athletes from their own winners instincts
- Protect the next generation from manipulating their health
- With gene doping, the health expenses for the sports movement will likely skyrocket

If we assume safety?

- Natural mutations have many advantages that are both appreciated and accepted
- Some can be screened for in order to meet the fair innings requirement
- However, with gene doping, one has to screen for many genetic variants in order to meet the same requirement

The snowballing inflation

- Inviting gene doping compares to a government handing over the banknote issuing privilege to its citizens (and still promising that the currency in terms of a good balance of effort and talent will be sustained)

Rules of fair play

- Sport activities presume a pre-competition agreement about rules
- Winning is essential but so is also fair play

Fairness in a strict sense

Fairness as playing in accordance with the rules – a sense of fairness deeply rooted among all social beings and acknowledged by athletes, spectators and sponsors

→	STARTSIDAN
→	NÄRINGSLIV24
→	KULTUR/NÖJE
→	RESOR
→	MAT & DRICK
→	SPORT

ANNONS

Publicerat 15 april 2005 05:38

Nytt hot: gendoping

Redan inom fem år kan det finnas idrottare som försöker fuska sig till framgång med hjälp av genmanipulation. Det tror Arne Ljungqvist, ordförande i IOK:s medicinska kommitté. - Vi vet att det finns en efterfrågan och måste vara beredda, säger han.

Efter anabola steroider, testosteron, epo och tillväxthorm ses genmanipulering som nästa hot mot en ren idrott. Vid en antidopingkonferens i Stockholm i går uttryckte Arne Ljungqvist farhågor att genteknik i dopingsyfte kan bli verklighet redan inom fem år. - En del idrottare verkar vara beredd att ta vad som helst utan att tänka på följderna. Det har vi många exempel på. Därför vill vi ligga i framkant när det gäller genterapi och försöka hitta testmetoder, säger



Arne Ljungqvist, ordförande i IOK:s medicinska kommitté, befarar att gendoping kan bli aktuellt inom en snar framtid. Foto: Scanpix

→ Fakta

Jag

K

Du

M

Sök



Tipsa en vän



Skriv ut sidan



Kommentera



Mest läst nu

Kaos på H&M butiker när McCartney-kollektion såldes
al-Qaida tar på sig bombdåd i Amman
Elizabethtown
[Hela läsartoppen](#)

ANNONS

Publicerat 15 april 2005 05:38

Ensam kamp mot idrottens fuskare

Bortsett från personlig scenutstrålning och diktion kan steget mellan Arne Ljungqvist och den sedan två år avlidne amerikanske skådespelaren Gregory Peck tyckas vara långt.

Fairness

- As equal opportunity or access - is not part of Sport
- As a [fair] share of innings - a part of Sport within some rough measures
- As fair play - intrinsic to Sport in its strictest sense

While protecting privacy

- Individuals seek opportunities for a private sphere, which is part of a larger social space in which they participate in various types of social relationships together with other individuals

Privacy

- Willing to give up privacy in order to:
 - Enjoy friendship, neighbourly relations
 - Satisfy a need for protection, safety and security in public places
 - Take part in sports activities

Gene testing - included in rules of fair play

An accepted part of different practices:
Research, medical treatment, sports
activities

A need to regulate: How reliable? Who
will have access? How to handle
additional findings? Will there be a need
to test genetic relatives?

Yes to gene technology

- A *no* to gene doping is consistent with a *yes* to medical treatment of sports-related injuries