



UNIVERSITY OF PÉCS  
MEDICAL SCHOOL



**SPORTMED**

University of Pécs Medical School  
Sports Medicine Center

# Talent selection Sport anthropometry

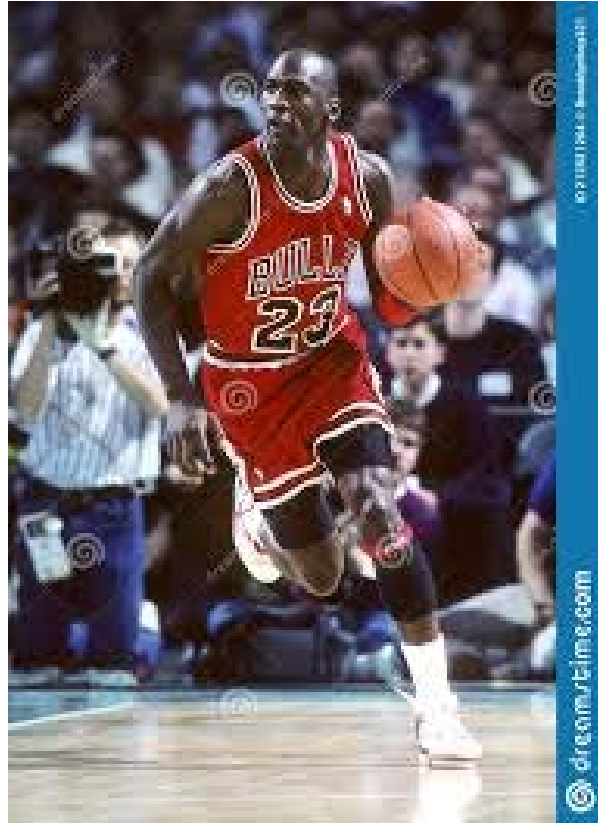
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Talent selection

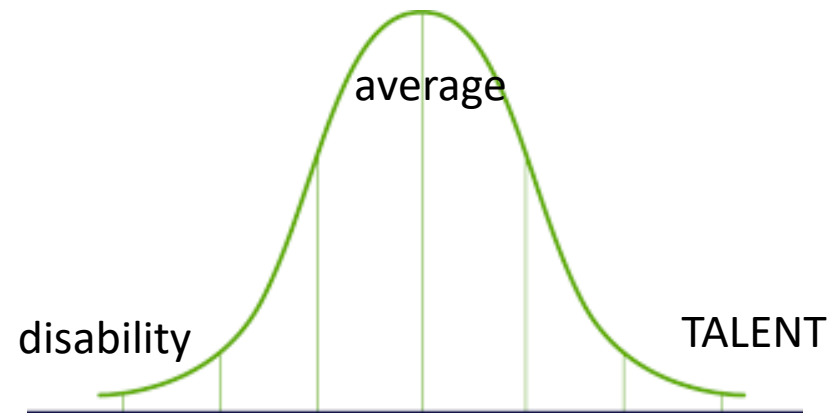
Who is the talent?



## Selection- who is the talent?

- RARETY

Gauss curve standard normal distribution



## Selection- who is the talent?

### -COMPLEXITY

- ✓ General intellectual ability
- ✓ Special mental ability (Thurstone 1938) spatial orientation, detection speed, verblity, speed of word typing, rememberance, numeracy, ability of induction
- ✓ H. Gardner (1983) 7 talent sphere :linguistic, mathematical-logical, spatial orientation, musical, interpersonal, intrapersonal, movement
- ✓ Creativity
- ✓ Motivation



## Selection- who is the talent?

### DUAL-ROOTEDNESS

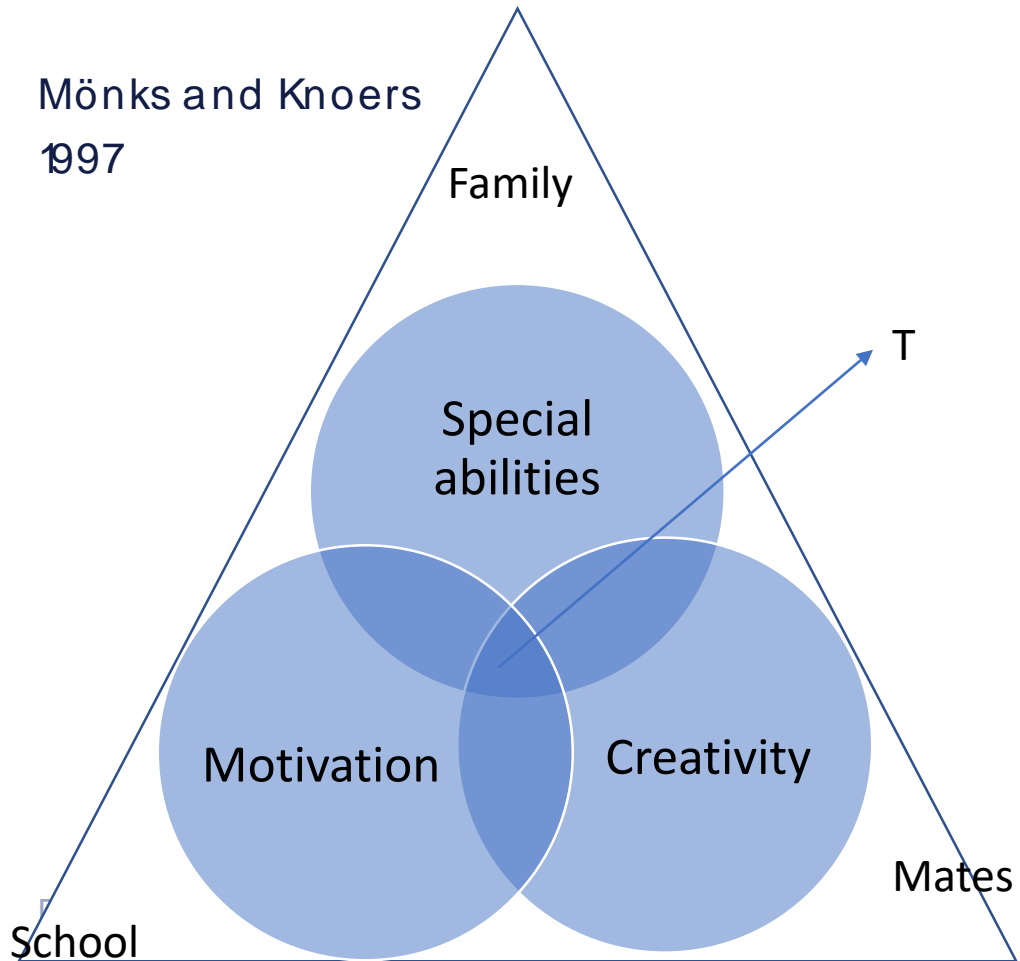


P= performance  
G= genetics  
E= environment

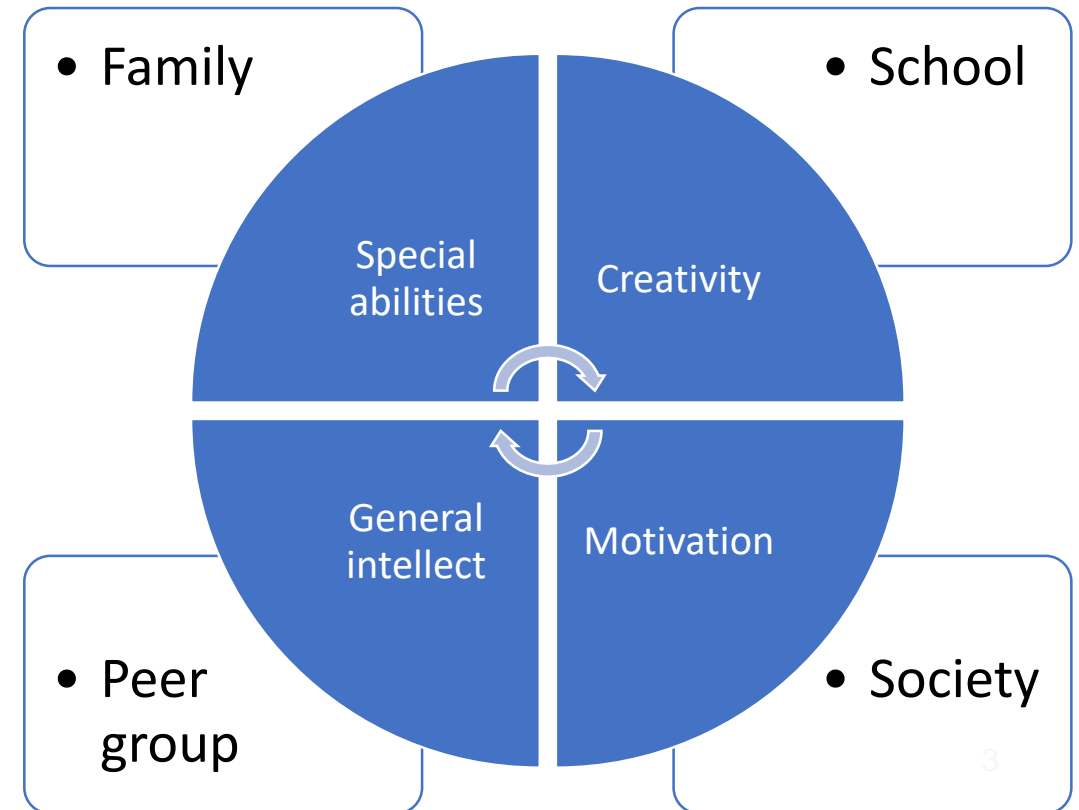


# Talent models

Mönks and Knoers  
1997



Czeizel 2x4 factors model



## Selection- who is the talent?-definition

- ✓ different opinions
- ✓ Sport-specific aspects
- ✓ Competitive/professional sports suppose special talents
- ✓ Only few researches deal with definition of sport-specific sport talents



## Selection- who is the talent? - definition

### 1. Sport talent is, who

- ✓ Inherited adequate biological bases and musculoskeletal structure for sport-specific needs
- ✓ These bases can be developed by trainings to reach the longterm prominent efficiency
- ✓ And has special anthropometric, physical, coordinating, conditional, and psychic abilities (without these they can't reach above average performance (Révész, 2008))

### 2. Sport talent is, who can reach the same performance-development with less work or who reach bigger development with same work as the others (Nádori, 1985)





## Selection

1. Natural selection
2. Indirect selection
3. Result-based selection
4. Scientific selection
  - ✓ Exact, reliable
  - ✓ Scientific methods
  - ✓ Diagnostic and longitudinal trials



## Selection- who is the talent?-management

- ✓ Different methods
- ✓ Different protocols of surveys
- ✓ Analysis of the results
- ✓ Analysis of the performance at competitions
- ✓ System in youth sport
- ✓ Key of success is TEAMWORK (parents, coach, school, club)
- ✓ Facilities, equipment, etc.



## Definition

- ✓ Height estimate
- ✓ Body composition
- ✓ Somatotype
- ✓ Biological maturity
- ✓ PHV

And based on the results

- ✓ Sport recommendation
- ✓ Loading possibilities



# International standards of measurements



### ISAK FULL PROFORMA

Name 1 \_\_\_\_\_  
 Name 2 \_\_\_\_\_  
 Country \_\_\_\_\_  
 Ethnicity and Sex (male=1, female=2) \_\_\_\_\_  
 Sport \_\_\_\_\_  
 Date of Measurement \_\_\_\_\_  
 Date of Birth \_\_\_\_\_

Dominant extr.: RGT  LFT   
 Comments: \_\_\_\_\_

		3rd measure?		min/med	
Body mass	TTS				
Stretch stature	TTM				
Sitting height					
Arm Span					
Troiceps cf	TR				
Subscapular cf	LPR				
Biceps cf	BR				
Iliac Crest cf					
Supraspinale cf	CSR				
Abdominal cf	HR				
Front Thigh cf	COR				
Medial Calf cf	MSR				
Head girth					
Neck girth					
Arm girth relaxed	FK				
Arm girth flexed, tensed (max)	FFK				
Forearm girth (max, relaxed)	AKK				
Wrist girth (min, distal styloid)	CUK				
Palm girth	KZK				
Chest girth (mesocephale)	MKK				
Waist girth (min.)					
Gluteal girth (max.)					
Thigh girth (1 cm dist. glut. line)	COK				
Thigh girth (mid tro-tib lat)					
Calf girth (max.)	ASK				
Ankle girth (min.)	BOK				
Acromiale-radiale					
Radiale-styloin					
Midstyloin-dacstyloin					
Iliospinale ht					
Trochanterion ht					
Trochanterion-tibiale laterale					
Tibiale laterale ht					
Tibiale mediale-sphyron tibiale					
Biacromial breadth	VAS				
A-P Abdominal depth					
Billioristal breadth	CRS				
Foot length (ak-pt)					
Foot width					
Hand 1-5 finger's dist. (max, stretched)					
Transverse chest breadth	MKS				
A-P Chest depth	MMG				
Humerus breadth (bicipondylar)	HUS				
Bi-clyoid					
Antille breadth					
Femur breadth (bicipondylar)	TDS				

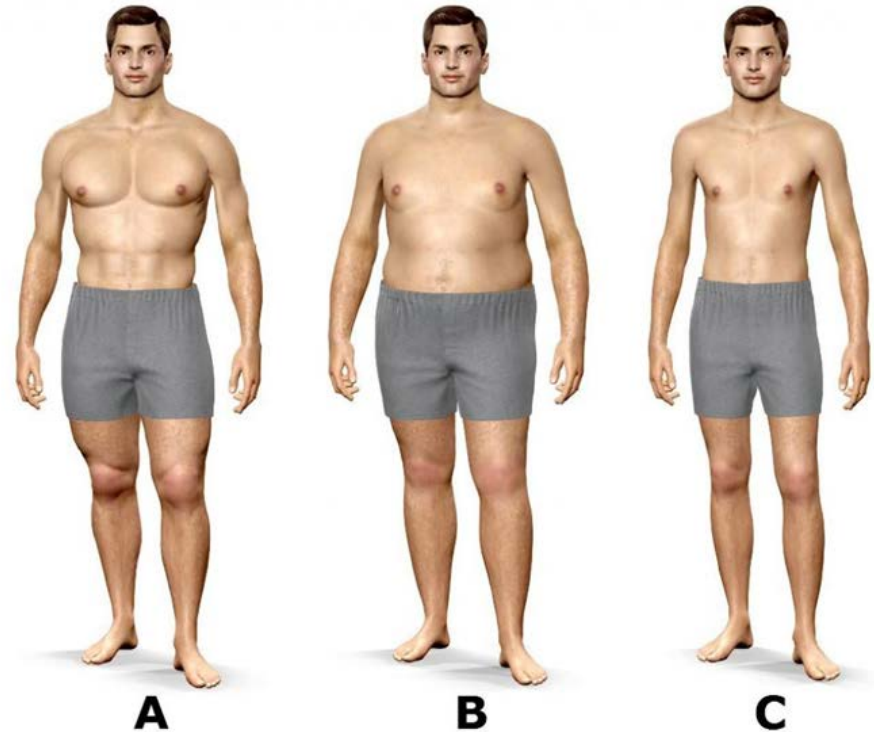


## Somatotypes

-**endomorphia** (photo B): relative fatness

-**mezomorphia** (photo A):  
musculoskeletal relative  
robustness

- **ectomorphia** (photo C):  
relative thinness



## Somatotypes

Strictly described sequence: endo-mezo-ecto

value	
0,5-2,5	small
2,6-5,4	middle
5,5-7	high
7-	very high

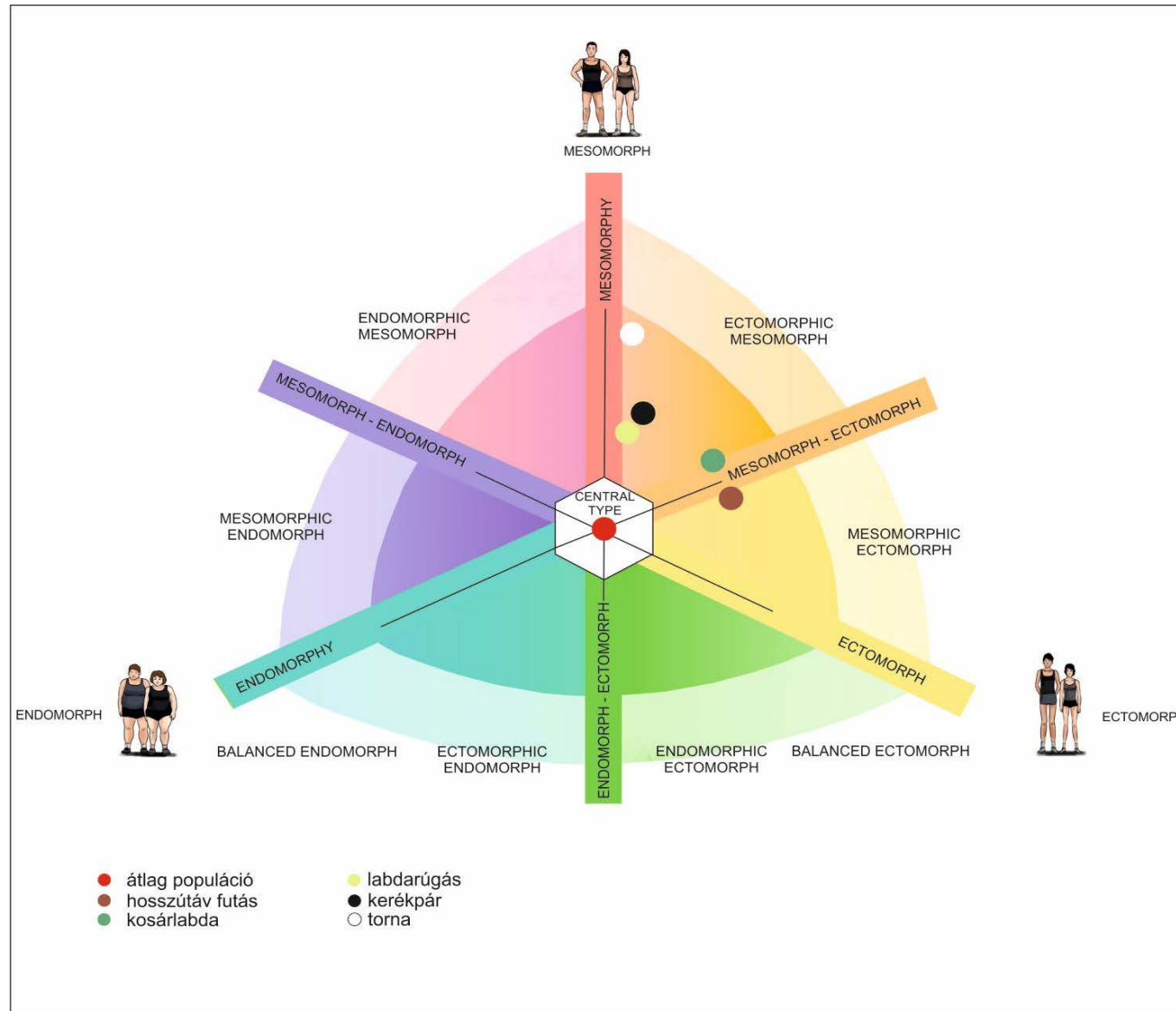


## Somatotype of Hungarian professional athletes

•Basketball	2,0 – 5,5 – 3,1
•Boxing (+75 kg):	2,2 – 6,1 – 2,1
•Canoe	2,1 – 5,7 – 2,3
•Fencing	2,8 – 5,2 – 2,0
•Gymnastic	1,4 – 5,8 – 2,8
•Judo (71-86kg)	3,0 – 6,0 – 1,7
•Böde Dániel	3,4 – 6,7 – 1,2
•Dzsudzsák Balázs	2,6 – 4,3 – 1,9



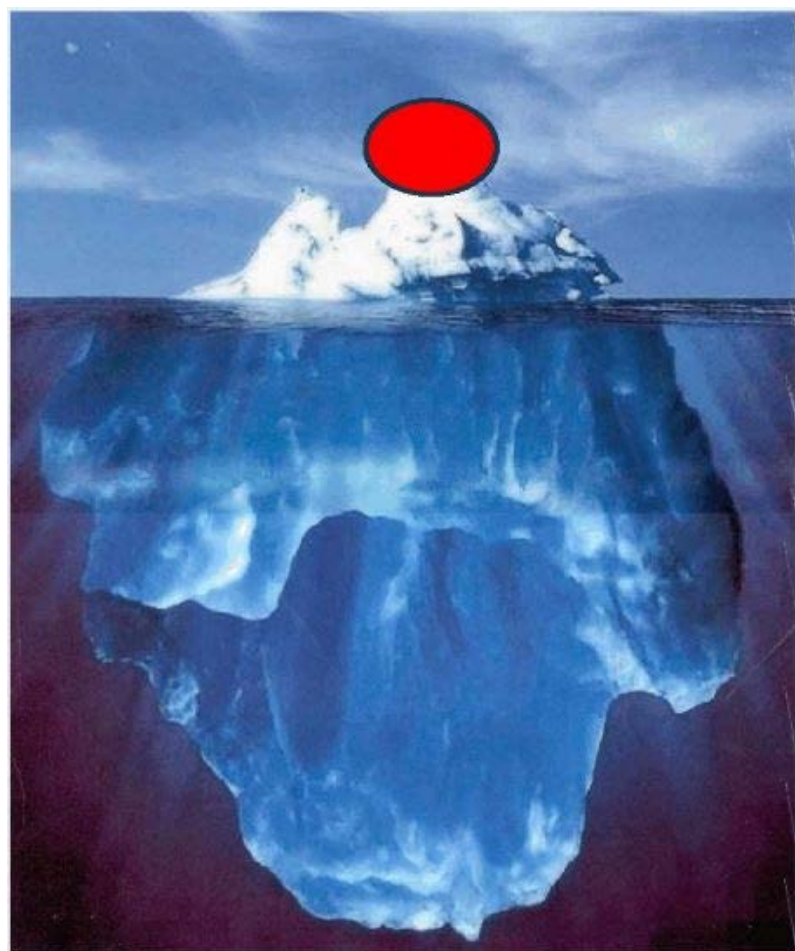
# Somatochart







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Thanks for attention!



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