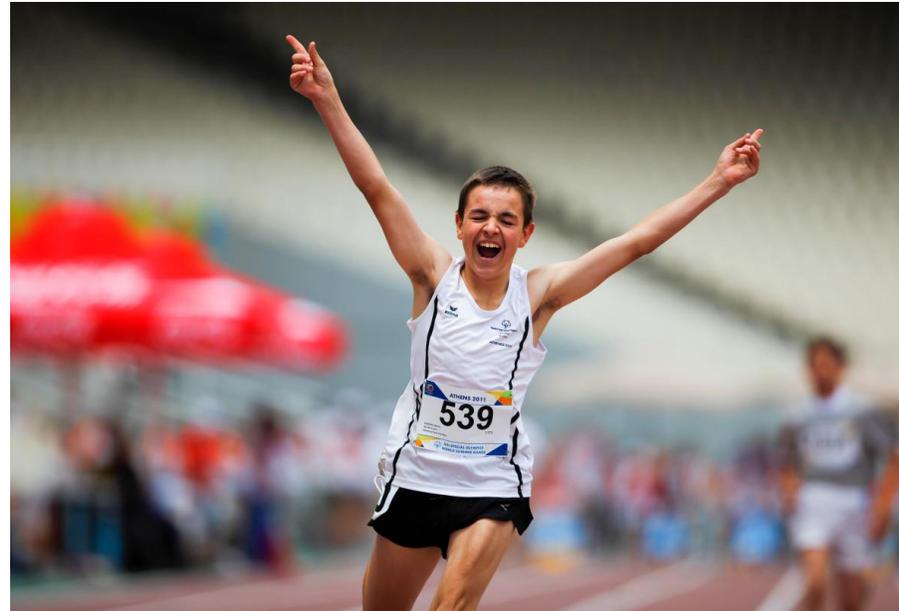


# Coaching manual: Athletics for people with Intellectual Disabilities



Debbie Van Biesen

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Jan Cornelissen

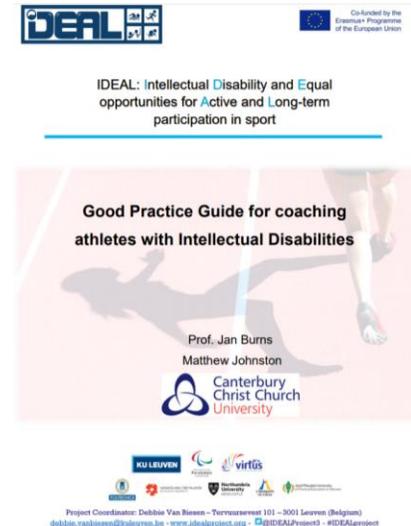
# CONTENT

1. Introduction
  1. General Guidelines
  2. Purpose
  3. Situation
  4. Who is the ID-athlete? (ID = intellectual disability)
2. 3 main areas of interest (cognitive, executive and adaptive functions)
3. Tips & tricks linked to the areas of interest
4. Example of good practice: IDEAL event

# 1.1 INTRODUCTION – general guideline (1)

- This manual is a sport specific addition to the **‘Good Practice Guide for coaching athletes with ID’**. The ‘Good Practice Guide’ contains the following chapters:

- S1: Introduction, Context and Purpose
- S2: Inclusive sport practices
- S3: Cognitive Factors and Sports Performance
- S4: Effective communication with athletes with ID and ASD in sport
- S5: Motivation and Sports Performance
- S6: Self-Regulation of learning and emotions in sport



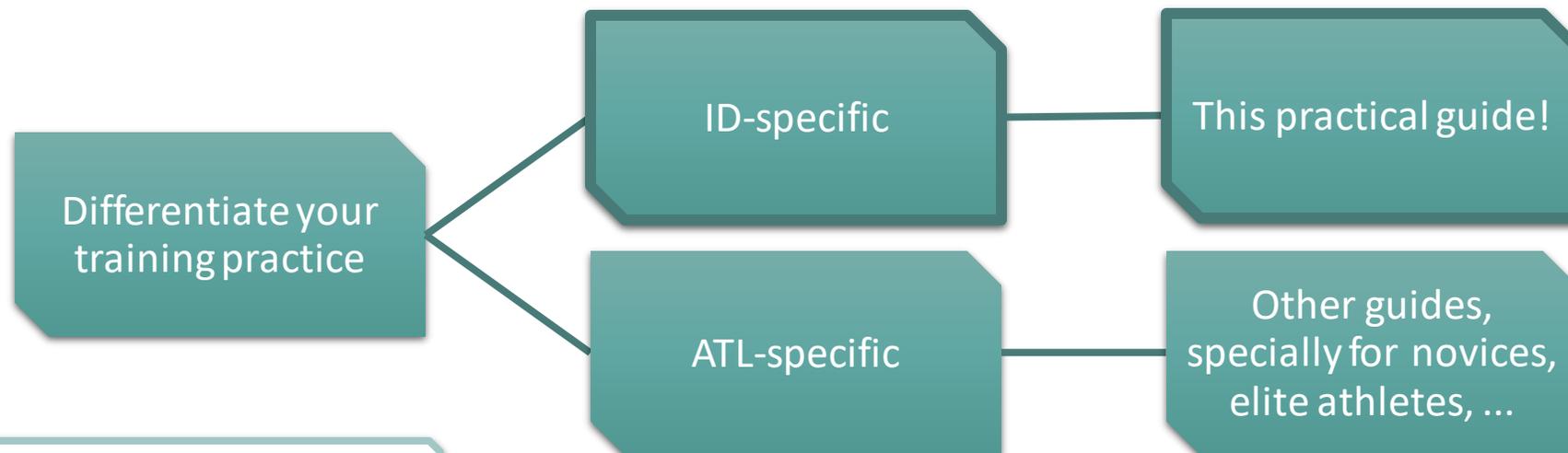
# 1.1 INTRODUCTION – general guideline (2)

- This manual is a sport specific addition to the **‘Good Practice Guide for coaching athletes with ID’**.
- 4 sport specific manuals were developed for the IDEAL project:
  - Athletics: example of individual sport
  - Basketball: example of team sport
  - Nordic ski: example of winter sport
  - Swimming: example of aquatic activity



## 1.2 INTRODUCTION – purpose

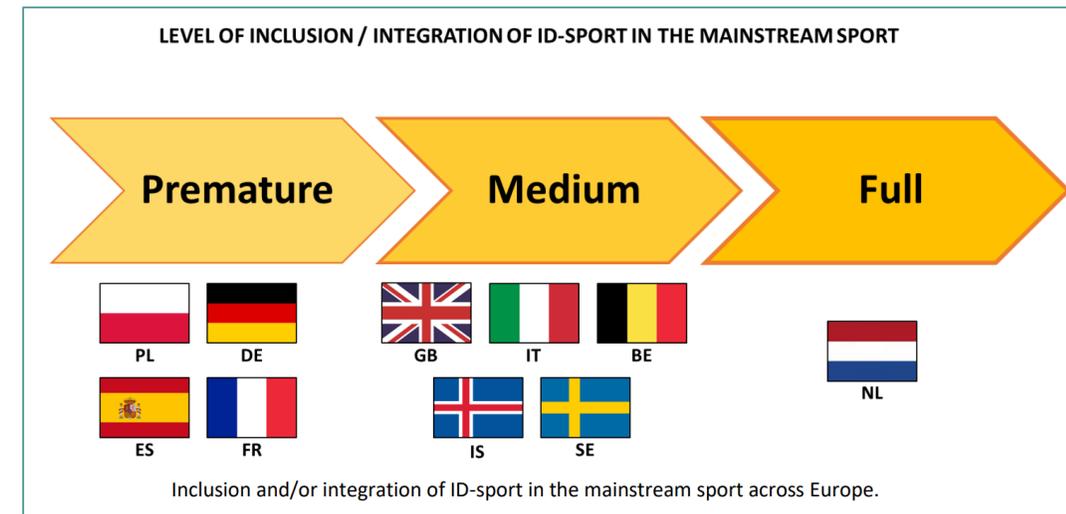
This manual is a practical guide developed for coaches to use when coaching **ID-athletes** (athletes with intellectual disability) in track and field. The guide uses pictures, video material and examples of good practice, offering tips and tricks that can be easily and directly applied in coaching practice.



# 1.3 INTRODUCTION – current situation (1)

## Current situation across Europe (study in 10 EU-countries)

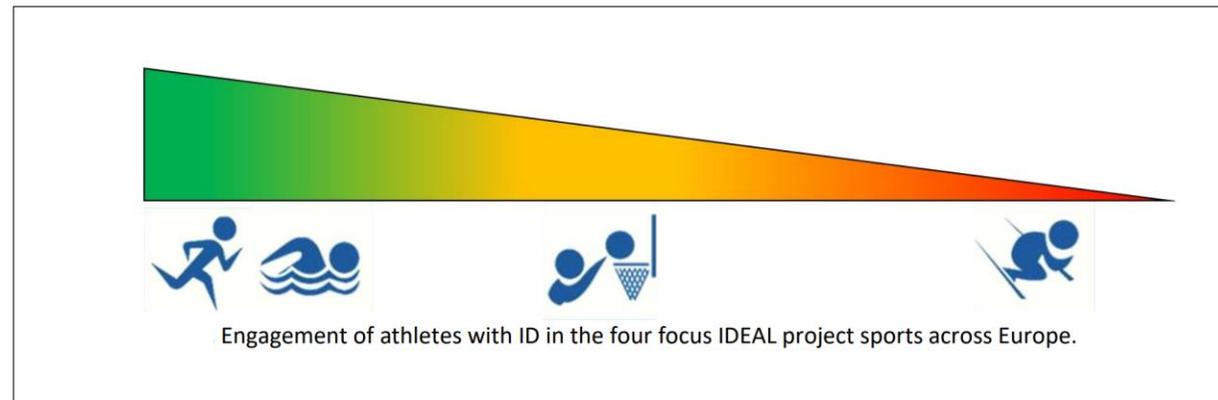
- Organisation on a continuum from limited to full inclusion or integration of ID-offer or ID-competitions in mainstream sport organisations
- Huge variety between countries and between sport disciplines
  - **Belgium:** the mainstream athletics federation (VAL) offers sports and competitions for para-athletes, including ID-athletes, in close collaboration with the disability sport federation (P-P): good example of inclusion.
  - **France:** the ID-sport federation (FFSA) offers sport and competition exclusively. No collaboration with the mainstream sport organisation. Efficient structure and high participation rates but no inclusion.



See: How is sport for people with intellectual disabilities organised across Europe? (2020)

## 1.3 INTRODUCTION – situation (2)

Athletics (and also swimming) are among the most popular sports for people with ID across Europe



See: How is sport for people with intellectual disabilities organised across Europe? (2020)

## 1.4 INTRODUCTION – Who is the ID-Athlete? (1)

There is no such thing as THE athlete with ID. They are all unique!  
They all have their own individual characteristics and strenghts.

It is important to focus on what they can achieve, and not to focus on their limitations only!



# 1.4 INTRODUCTION – Who is the ID-Athlete? (2)

In sport there are certain aspects to take into consideration when coaching ID-athletes. They can have specific problems with the following:



# CONTENT

1. Introduction
2. 3 main areas of interest (cognitive, executive en adaptive functions)
  1. Cognitive functions
  2. Executive functions
  3. Adaptive functioning
3. Tips & tricks linked to the areas of interest
4. Example of good practice: IDEAL event

## 2. AREAS OF INTEREST

*3 areas of interest, tailored to the ID-athlete*

### 2.1 Cognitive functions

- Reaction time, processing time, execution time
- Memory

### 2.2 Executive functions

- Pacing
- Goal setting

### 2.3 Adaptive functioning

- Conceptual skills
- Social skills
- Practical skills

## 2.1 AREAS OF INTEREST – cognitive functions (1)

### Definition **cognitive functions**

All processes involved in the acquisition  
and processing of information

(Shalock et al., 2010)

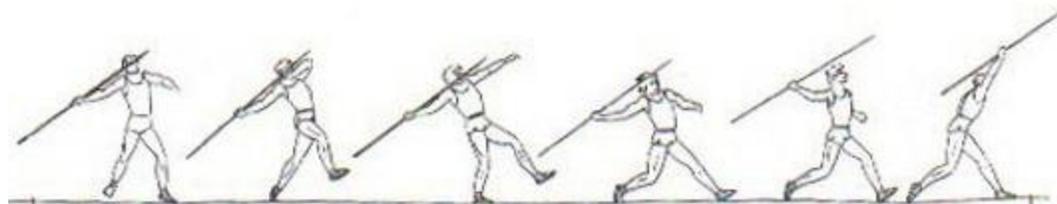
∴ Also known as mental processing



## 2.1 AREAS OF INTEREST – cognitive functions (2)

### Examples of cognitive functions

- Reaction time
  - E.g. After start signal
- Memory
  - E.g. difficulties to remember the specificities of javelin throw: What is the weight? First run-up or first preparation?



## 2.2 AREAS OF INTEREST – executive functions (1)

### Definition **executive functions**

Set of functions that connect and align the various cognitive domains for optimal functioning

(Van Biesen et al., 2016)

∴ Also known as the control panel or management system of the brain



## 2.2 AREAS OF INTEREST – executive functions (2)

### Examples of executive functions

- Self-regulation
  - E.g. Pacing
- Planning
  - E.g. Goal setting
- Inhibition (ignore irrelevant stimuli)
- Cognitive flexibility
- Attention



## 2.2 AREAS OF INTEREST – executive functions (3)

### Sport specific examples of executive functions

- Pacing
    - E.g. Distribute your energy over the 1500m race
  - Goal setting
    - E.g. Work towards a new personal record in high jump
- VERSUS
- Set clear processing goals
    - E.g. Evaluate from run-up of 5 strides towards 7 strides
    - = forward chaining of technical elements



## 2.3 AREAS OF INTEREST – adaptive functioning (1)

### Definition of **adaptive functioning**

Adaptive functioning is the set of conceptual, social en practical skills that are learned to be able to perform well during activities of everyday living

(Shalock et al., 2010, p. 15)

∴ Also known as social adaptive skills

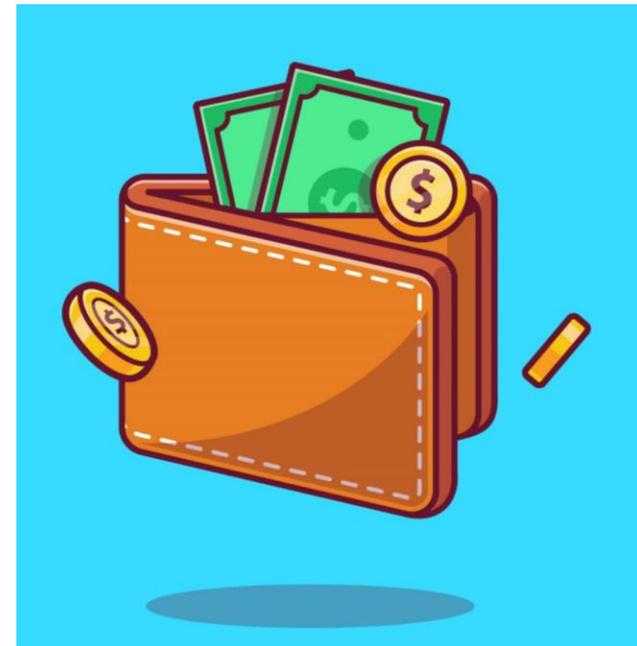


## 2.3 AREAS OF INTEREST – adaptive functioning (1)

### Examples of adaptive functioning

- **Conceptual skills**

- Language
- Reading and writing ability
- Concepts such as money, time and numbers

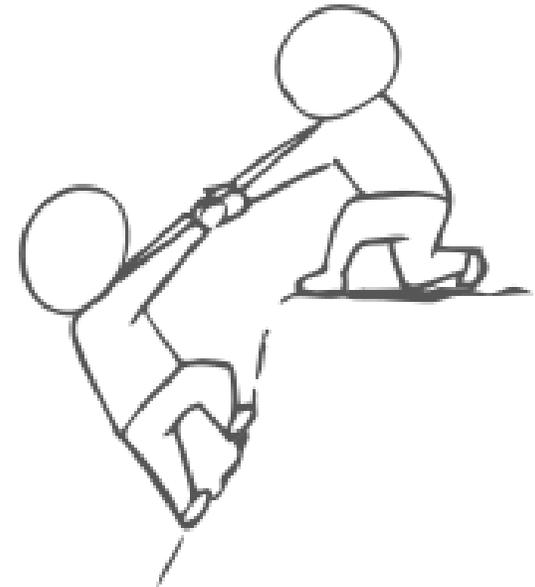


## 2.3 AREAS OF INTEREST – adaptive functioning (2)

### Examples of adaptive functioning

- **Social skills**

- Interpersonal skills
- Social responsibility
- Self-confidence
- Naivety
- Obey rules
- Avoid becoming the victim
- Solve social problems



## 2.3 AREAS OF INTEREST – adaptive functioning (3)

### Examples of adaptive functioning

- **Practical skills**

- Activities of daily living
- Professional skills
- Concept of money
- Safety
- Health
- Transport
- Structure and routines
- Telephone use



## 2. E.g. AREAS OF INTEREST

### Combined example

- Adapt to the environment
  - Training individually or in group and adapt your speed
    - Can I keep a constant pace when running individually?
    - Can I feel when the speed of the group is too fast or too slow for me?
  - Long distance running on track or in nature
    - What type of shoes should I wear?

Executive functions  
Self-regulation  
Pacing

Adaptive skills  
Practical skills



# CONTENT

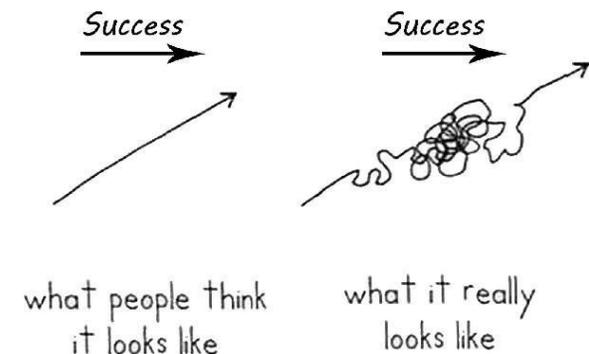
1. Introduction
2. 3 areas of interest (cognitive, executive en adaptive functions)
3. Tips & tricks linked to the areas of interest
  - General
  - How to use these tips & tricks
  1. Training
  2. Running
  3. Start
  4. Sprint
  5. Relay 4 x 100 m
  6. Long distance running
  7. Long jump
  8. Hurdles
  9. High jump
  10. Throwing events
  11. Equipment
4. Example of good practice: IDEAL event

### 3. TIPS & TRICKS – general (1)

We want to provide information on why and how to adapt your exercises to **ID-athletes**. We start from the profile of the athletes, their strenghts and weaknesses.

We want to evoke the following approach:

1. Reflect on the athletes' limitations:  
what exactly is causing difficulties?
2. Adjust for that specific aspect
3. Find tips & tricks here on how you can adjust



### 3. TIPS & TRICKS – general (2)

CHECK  
MOTIVATE  
STRUCTURE  
ENTHOUSIASM  
DEMONSTRATE  
POSITIVE REINFORCEMENT  
SUCCES EXPERIENCES  
DIFFERENTIATION  
ENERGETIC  
REPETITION  
PATIENCE

General guidelines to make every training session a succes for the athlete, and for the coach!

**SUCCES**



How to use these tips & tricks?

# TIPS & TRICKS – High Jump (1)

Discipline

Explanation tips & tricks

Areas of Interest

Adaptive skills: Social and practical skills

## “Fear of the high-jump bar”

- Elastic ropes are often used
- **Soft materials** can be used to make the transition (e.g. soft fleece, teddybear etc.)
- Once the anxiety is reduced, the adaptations can fade out
  - Soft materials can be used already when introducing the rope, to make the transition to the bar afterwards smoother



Picture: <https://www.sport-thieme.nl/>



Link to video

Menu

Back to CONTENT: Tips & tricks

How to use these tips & tricks?

# TIPS & TRICKS – High jump (2)

Discipline

Page 2

Areas of Interest

Adaptive skills: Social & practical skills

“Fear of the bar” → soft equipment

- Social skills
  - Self-confidence
  - Naivety
  - Avoid being victimised
- Practical skills
  - Safety

Explanation Area of Interest



Picture: <https://www.sport-thieme.nl/>



Link to video

Menu



Back to CONTENT: Tips & tricks

<https://www.youtube.com/watch?v=XE54eKUbwC8>

## 3.1 TIPS & TRICKS – training (1)

### “Structure”

Most of the adaptations for youth athletes can be used for ID-athletes

- Set clear rules and boundaries
- Fixed routines and repetition
- Bring variety, don't work too long on the same activity
- One goal at the time



Picture: <https://blog.nasm.org/training-youth-athletes>

## 3.2 TIPS & TRICKS – training (2)

### “Structure”

Visualise making use of **colour** and pictograms

- ⚠ Cones, shirts, hoops, ...
  - ⚠ e.g. the yellow team starts at the yellow cone and uses yellow balls
- ⚠ Use the colour green for starting and red for finish line. Use colours consistently
- ⚠ **B**lue for **L**eft en **R**ed for **R**ight



## 3.2 TIPS & TRICKS – training (3)

### “Structure”

Visualise the structure using **colours** and **pictograms**!

⚡ Timeline with pictograms (simplified example)

⚡ Come together at the same spot (line) → running exercises → break → competitive game → Finish



⚡ Indicate time using coloured hourglasses (e.g. red hourglasses for 5 min, yellow for 15 min, yellow for 15 min, bleu for 30 min)

⚡ Use the same colour for the building blocks in the timeline (cfr. green = start, red = finish, etc.)

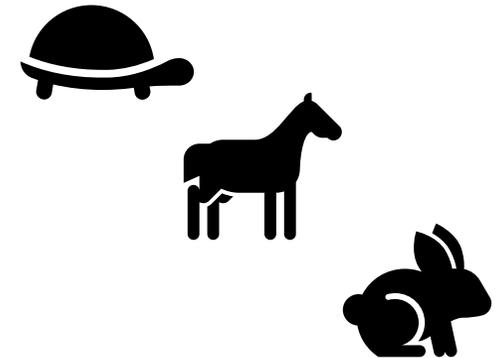
## 3.2 TIPS & TRICKS – Running (1)

 Make abstract concepts like time, distance and velocity as concrete as possible

Run like a turtle (slow, long distance)

Run like a horse (medium, middle distance)

Run like a hare (hast, sprint)



## 3.2 TIPS & TRICKS – running (2)

### “Additional tips & tricks for running”

🏃 Visual cues to indicate the target (where to run to?)

🏃 Start and finish signs

🏃 Buddy

🏃 Adjust distances

🏃 To prepare for competition: provide practice for running lines, start after starting shot, and cross the finish line

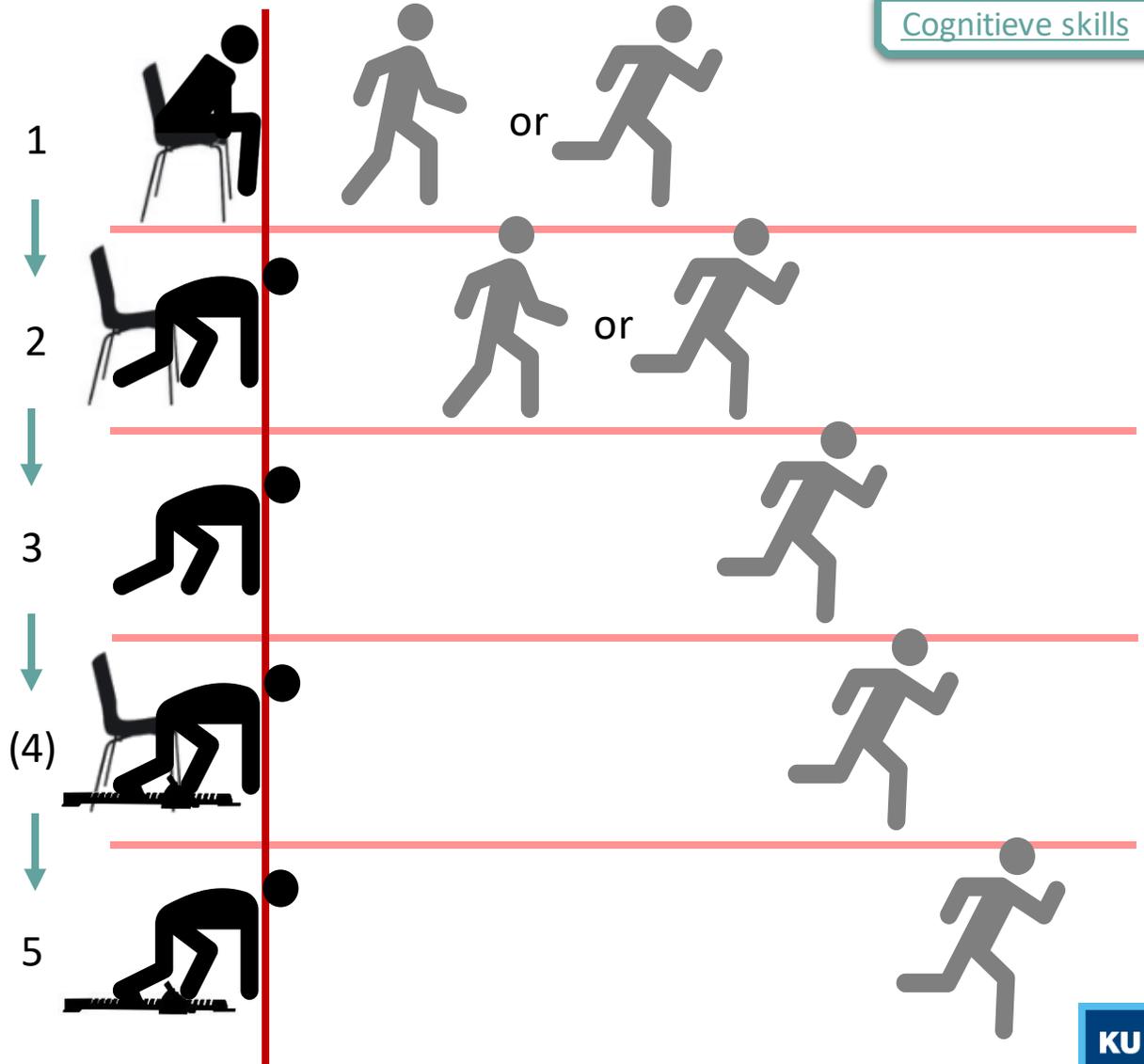


## 3.3 TIPS & TRICKS – start (1)

### “Start from a chair”

- Progression towards starting blocks
  - Use a familiar object: chair
    1. Use the chair first to take the sitting position
    2. Afterwards hands on the ground, but still sitting on chair
    3. Remove the chair
    4. Introduce starting blocks (new), use the chair (familiar) again
    5. Start from starting blocks without chair

*Every progression can be an end goal!*



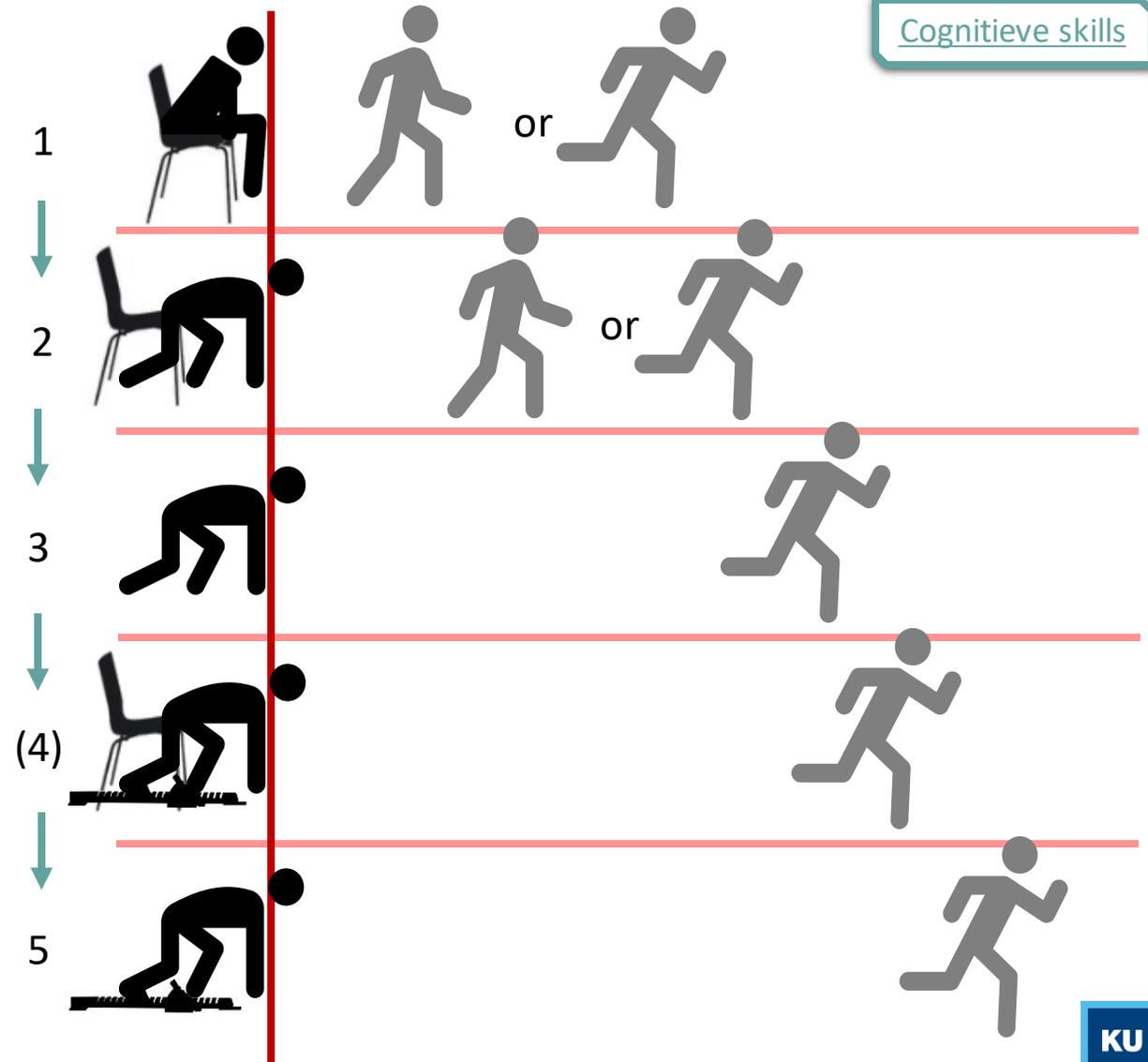
## 3.3 TIPS & TRICKS – start (1)

### “Start from a chair”

- Cognitive skills

- Memory

Help them to memorize the correct movement, because starting from a chair is a good simulation. Progression stepwise until they are able to do it without using the chair.



## 3.4 TIPS & TRICKS – sprint (1)

Adaptive skills: [conceptual skills](#)

### “Running in lanes”

- Emphasise where the lines are with coloured cones, mainly where the different lines cross. Give the athletes jackets in the same colours for additional visual support

200m or more



100m or less



## 3.4 TIPS & TRICKS – sprint (2)

Adaptive skills: conceptual skills

### “Running in lanes”

- Remove the cones one by one until they can run in lanes without using cones



## 3.4 TIPS & TRICKS – sprint (3)

Adaptive skills: conceptual skills

### “Running in lanes”

- Conceptual skills
  - Difficulties to visualise and keep the correct track

200m or more



100m or less



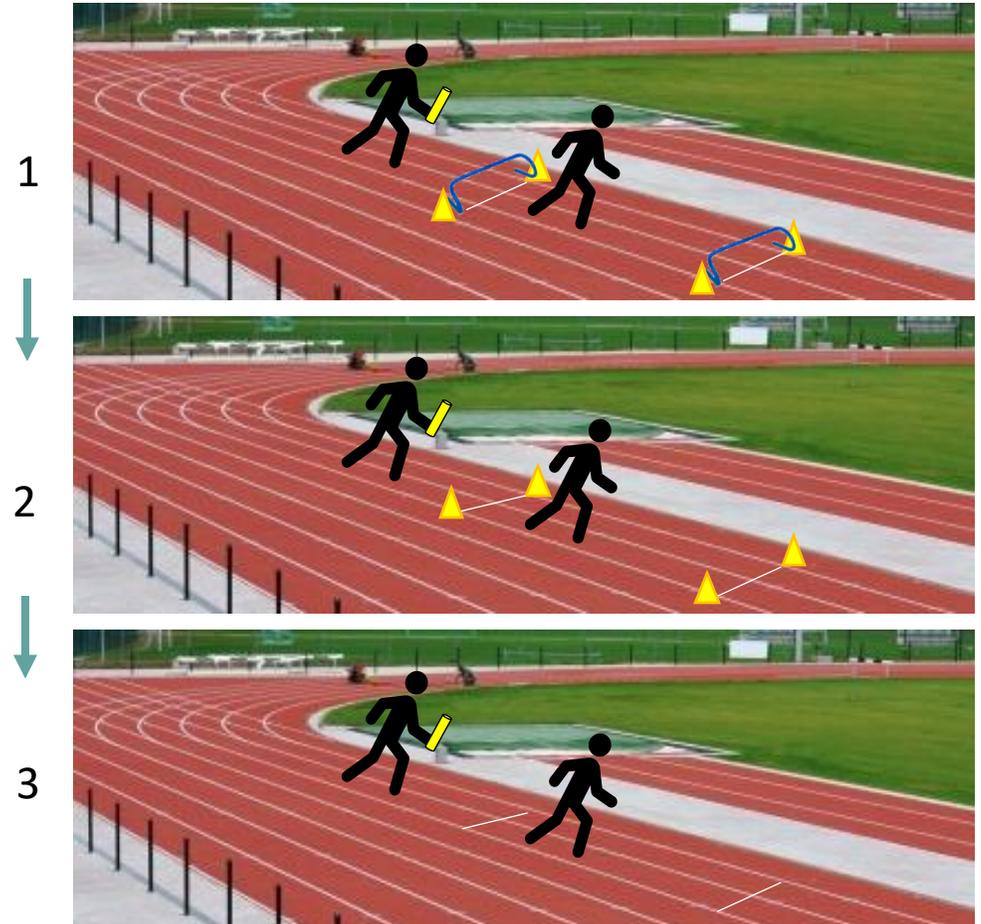
## 3.5 TIPS & TRICKS – relay 4 x 100m (1)

Cognitive skills and Adaptive skills : conceptual skills

### “Pass-through zone”

- Use benches or low hurdles, in stead of lines or cones
- Not only visual, but also physical hurdle
  1. Low hurdles and cones
  2. Only cones
  3. No equipment

*Every progression can be an  
**end goal!***

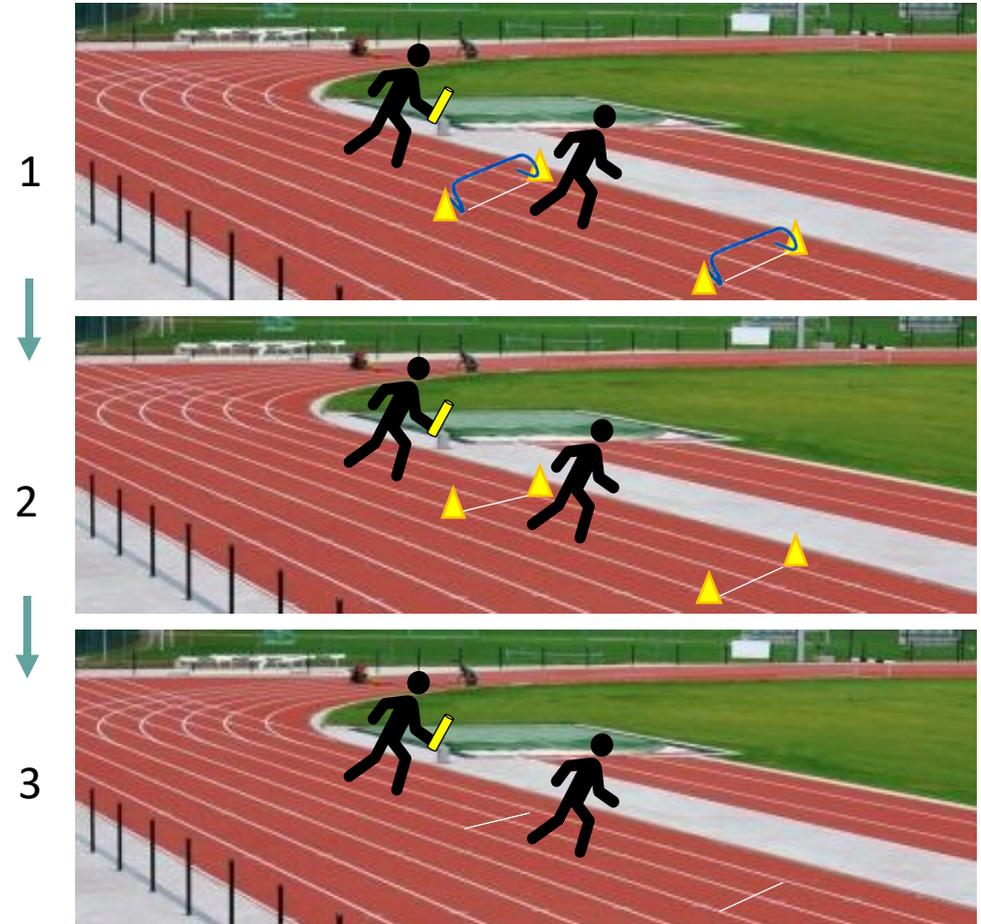


## 3.5 TIPS & TRICKS – relay 4 x 100m (2)

Cognitive skills and Adaptive skills: conceptual skills

### “Pass-through zone”

- Cognitive skills
  - Difficult to remember where the zone is
- Conceptual skills
  - Difficult to understand what a ‘pass-through zone’ is. A motor action like a jump over a hurdle can clarify. You can not pass the relay baton too soon or too late when you stay in this zone. This is clear for both runners



## 3.6 TIPS & TRICKS – long distance (1)

Cognitive skills, Executive skills and Adaptive skills: conceptual skills

### “Motivation to fatigue/maximal effort”

ID-athletes often stop running before full exhaustion. Motivate them to keep running, using visual stimulating equipment.

Transparant tube filled with (table) tennis balls until it's full:

- They observe their progression
- Attention is removed from the running and fatigue, but directed towards filling the tube

For example:

- Add a ball in the tube after each lap, one at the time



Large hourglasses are also useful tools. The abstract concept of time is difficult to understand and can be visualised easily to make it more concrete. It motivates the athlete to keep going until the end.



E.g. 60', 45', 30', 15', 5'

## 3.6 TIPS & TRICKS – long distance (2)

Cognitive skills, Executive skills and Adaptive skills: conceptual skills

### “Motivation to fatigue”

#### Cognitive skills

- The tube replaces the counting and reduces the cognitive load

#### Executive skills

- Pacing: the tube and the hourglasses are tools to dose your forces

#### Conceptual skills

- The concept of time is difficult. It helps when we make it concrete/visual. After a while they start attaching the colour to the time (e.g. yellow is 15 min).



Vb. 60', 45', 30', 15', 5'

## 3.6 TIPS & TRICKS – long distance (3)

### “Motivation to reach maximal effort”

ID athletes often stop running before full exhaustion. You can motivate them to continue using visual stimulating equipment.

Other examples to improve pacing capacity:

-  Running between ropes (see picture)
-  Count out loud (e.g. 15 or 20 sec)
-  Whistle after a certain time



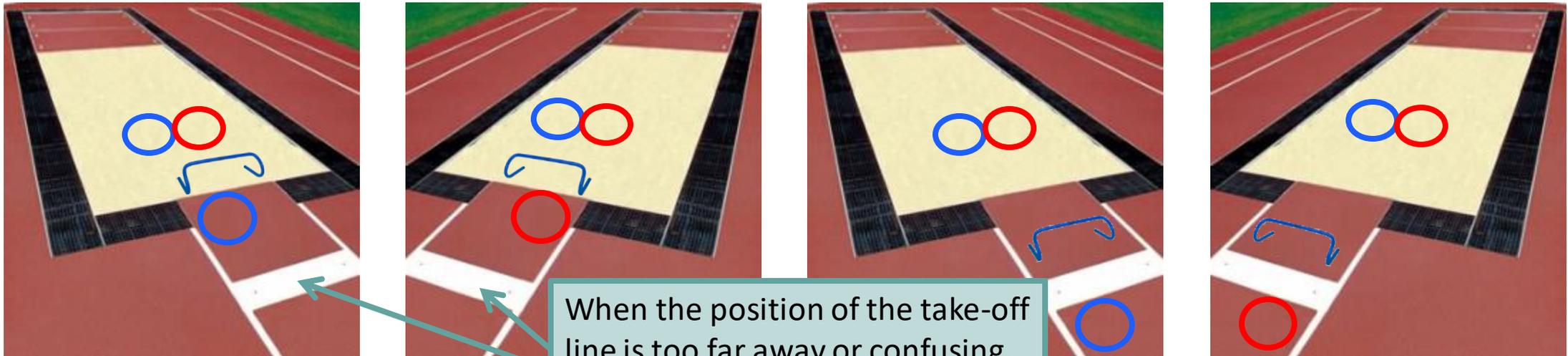
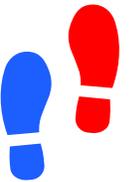
# 3.7 TIPS & TRICKS – long jump (1)

Cognitive skills and Adaptive skills: conceptual skills

## “Take off from hoop”

Same principle can be applied in triple jump or high jump!

The coordination of the sequence can be complicated: run-up, take off from 1 foot, landing on both feet. Indicate with coloured hoops or spots: blue = left and red = right. Low hurdles can be used to make them jump higher.



When the position of the take-off line is too far away or confusing, you can let them jump from the edge of the sandpit.

## 3.7 TIPS & TRICKS – long jump (2)

Cognitive skills and Adaptive skills: conceptual skills

### “Take off from hoop”

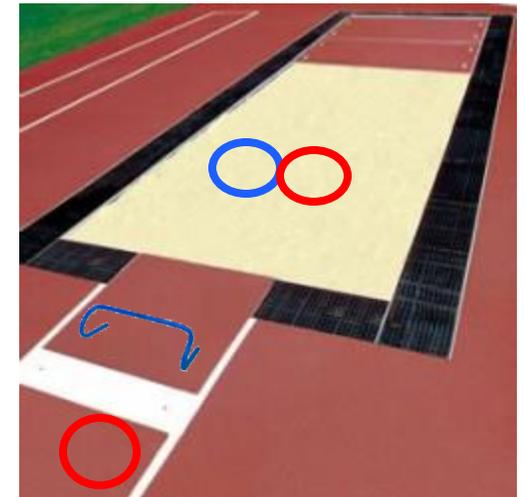
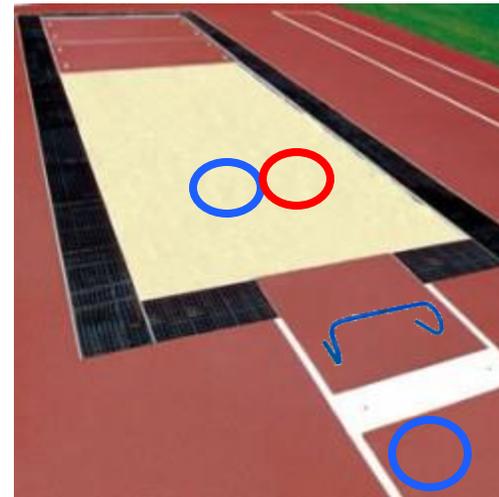
#### Cognitive skills

- The speed of execution is high, which can make it complicated to remember the sequence and correct technique



#### Conceptual skills

- Lateralisation can be difficult (left-right distinction). Hoops, spots, or wristband can offer support



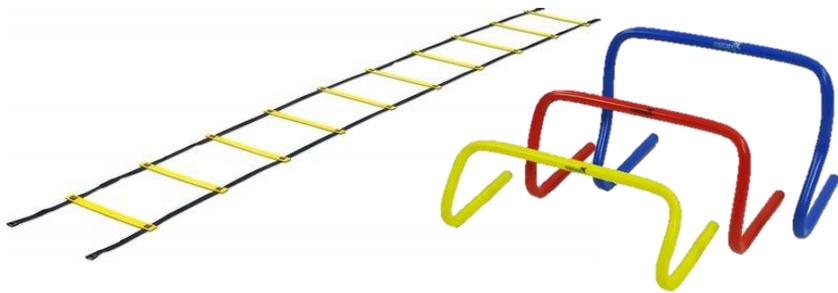
## 3.7 TIPS & TRICKS – hurdles (1)

Adaptive skills: practical skills

### “Hurdles as training”

Hurdles is a discipline which is not often offered in competition for ID-athletes. However, it can be very useful to train running techniques, **balance**, coordination and timing.

Ladders, low and high hurdles can be used for balance training, overcome anxiety, and transfer to situations of daily living



## 3.7 TIPS & TRICKS – Hurdles (2)

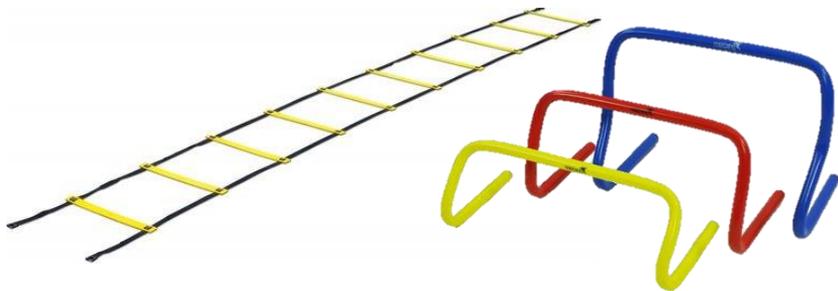
Adaptive skills: practical skills

### “Hurdles as training”

Practical skills:

The transfer to activities of daily living is often underestimated.

Postural control, reduced anxiety and risk estimation are all valuable skills.



## 3.8 TIPS & TRICKS – high jump (1)

Adaptive skills: Social and practical skills

### “Fear of the high jump bar”

- Elastic ropes are often used
- **Soft materials** can be used to make the transition (e.g. soft fleece, teddy bear, etc.)
- Once the anxiety is reduced, the adaptations can fade out
  - Soft materials can be used already when introducing the rope, to make the transition to the bar afterwards smoother



Afbeelding: <https://www.sport-thieme.nl/>



## 3.8 TIPS & TRICKS – high jump (2)

Adaptive skills: Social and practical skills

**“Fear of the high jump bar”** → soft materials

- Social skills
  - Self-confidence
  - Naivety
  - Avoid begin victimised
- Practical skills
  - Safety



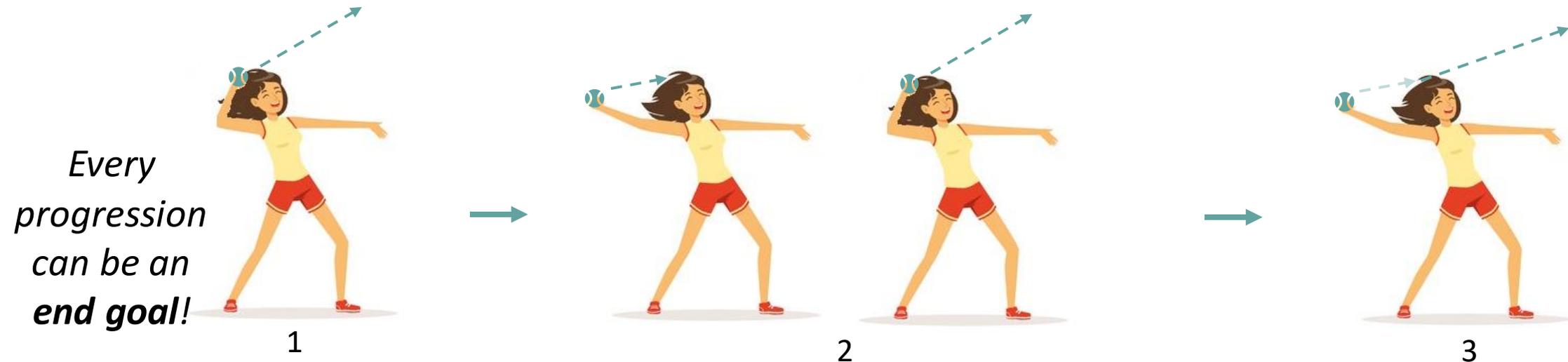
Picture: <https://www.sport-thieme.nl/>



## 3.9 TIPS & TRICKS – throwing (1)

### “Technique analysis”

1. Ball on the head – throw
2. Bring arm backwards – ball on the head – throw
3. Bring arm backwards – throw

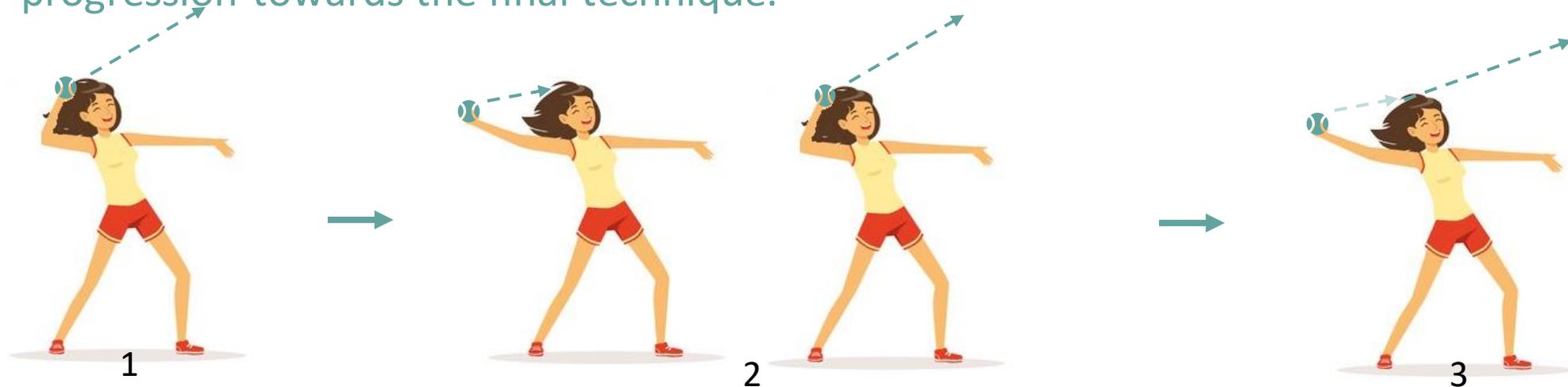


## 3.9 TIPS & TRICKS – throwing (2)

### “Technique analysis”

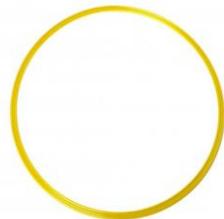
- Cognitive skills
  - Memory

You offer the athletes a mnemonic. To take a starting position for the throw with the ball on the head stimulates taking the correct starting position. Step by step progression towards the final technique.



## 3.9 TIPS & TRICKS – throwing (3)

- 🚀 **Demonstrate!**
- 🚀 Use **lighter weights or alternative equipment** (e.g., softballs, light medicine balls, rubber shot puts, soft discus, foam javelins, hockeyballs, ...)
- 🚀 Use **large goals** for targeting throws to increase feeling of success
- 🚀 Good supervision and **safety** measures when athletes have reduced inhibition control, lack of sense of danger, or when they show aggressive or uncontrolled behaviours



## 3. TIPS & TRICKS - Equipment

-  All equipment in various colours
-  Dice with various activities/exercises on each of the 6 sides to increase engagement
-  Big tiles (dominoes) to use as an abacus in various colours
-  Hourglasses
-  Jigsaws of 10/15 pieces to switch focus during running
-  Use rubber spots in the form of a foot

# CONTENT

1. Introduction
2. Areas of interest (cognitive, executive en adaptive functions)
3. Tips & tricks linked to the areas of interest
4. Example of good practice: IDEAL event

# 4. EXAMPLE OF GOOD PRACTICE: IDEAL EVENT

G-indoor event: Open Belgian Championship (elite sport) and recreational competition

- Competitive event including **various** disciplines, disability groups and ages
- **Structure** is provided by means of colours and pictograms
- Recreational event, also open for **novices**, who are not members of any sports club
- Elite para-athletes and famous Tv-star present

**Gindoor**  
athletics

Door zo! 'k bij zijn,  
mijn gedocht!  
BALTHAZAR BOMA



OPEN BK AMH indoor  
en G - RECREA

8 december 2019  
Topsporthal Vlaanderen  
Zuiderlaan 14 – Gent  
Vanaf 12u30



Back to CONTENT: Example of good practice: IDEAL event

# 4. EXAMPLE OF GOOD PRACTICE: IDEAL EVENT

- G-indoor event: Open Belgian Championship (elite sport) and recreative competition
  - Students/volunteers with **ID-experience**
  - **Good practice guide** with tips and tricks
  - **Information available** regarding sport opportunities in Belgium
  - **ID-athletics toolbox** with adapted equipment, manual, folders, games



# 4. EXAMPLE OF GOOD PRACTICE: IDEAL EVENT

Tag: all disciplines are visualised. After completing each of them, the picture is marked. After completing all numbers, they receive a goodie bag.



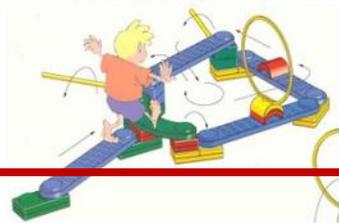
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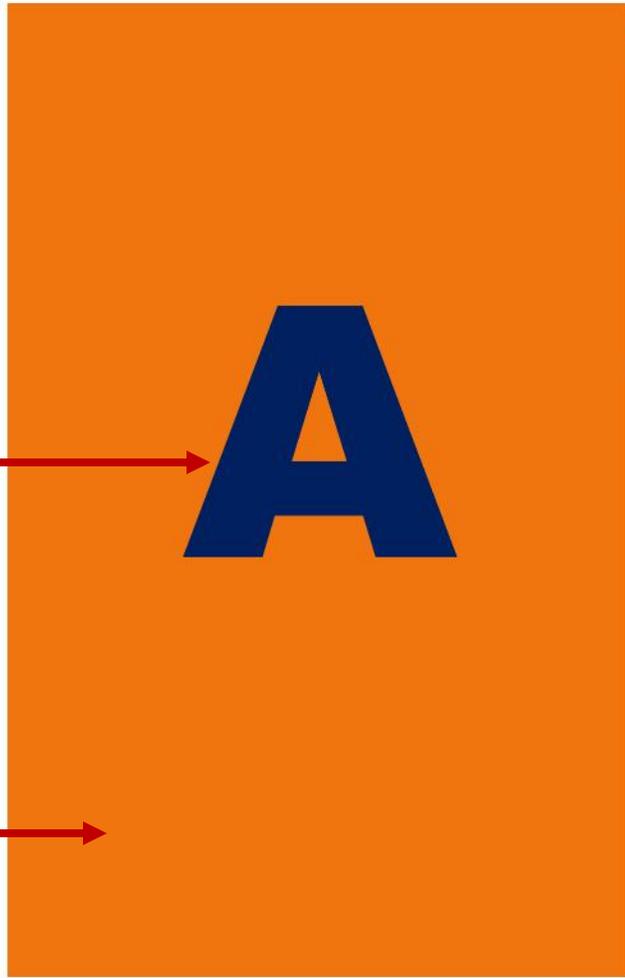
2



3



4



5



6



7



8



9

Break

Letter

To indicate the group they belong to (can also be a real competition number)

Colour

To indicate the relay team they belong to

Relay run  
By colour

Apotheosis

Diplome, goodie bag and medaillon

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