FEI

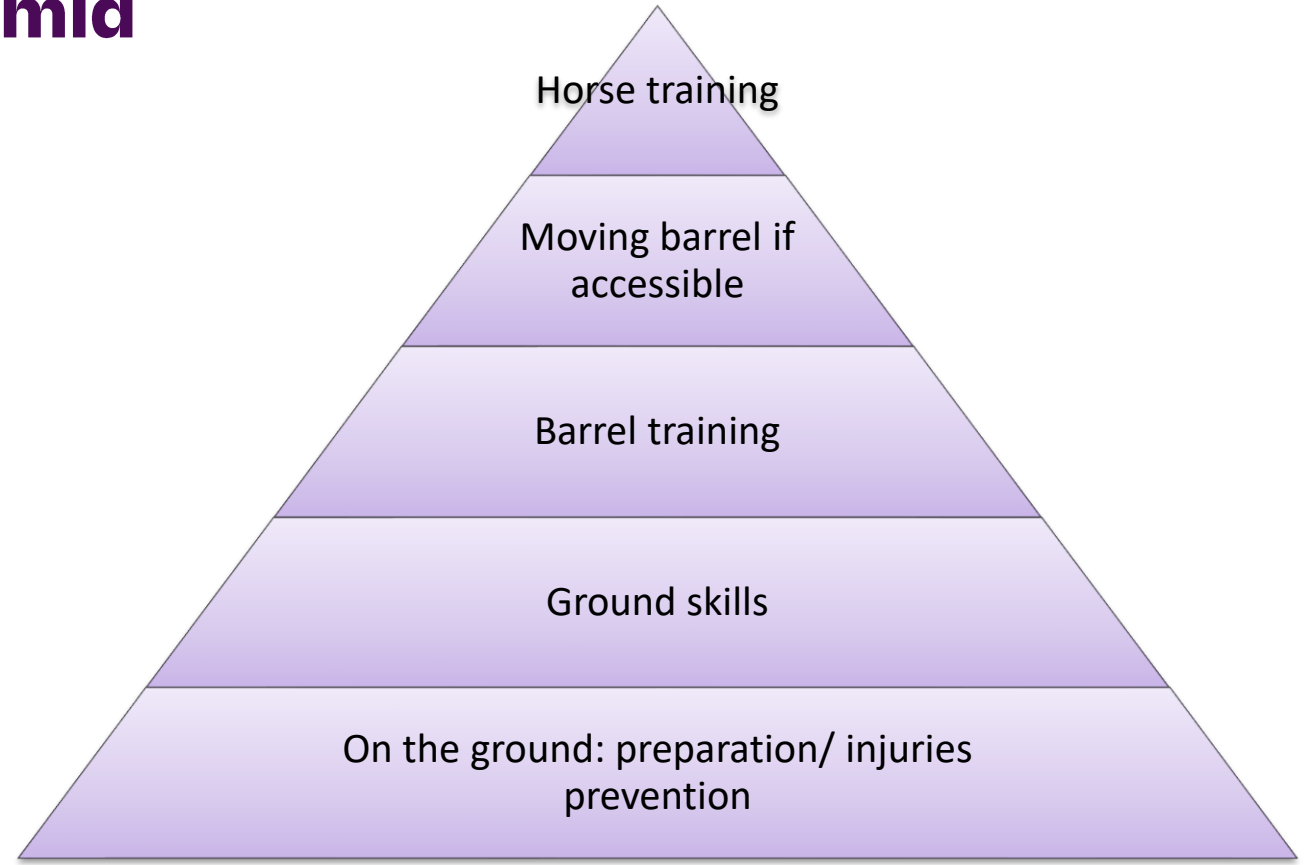
VAULTING

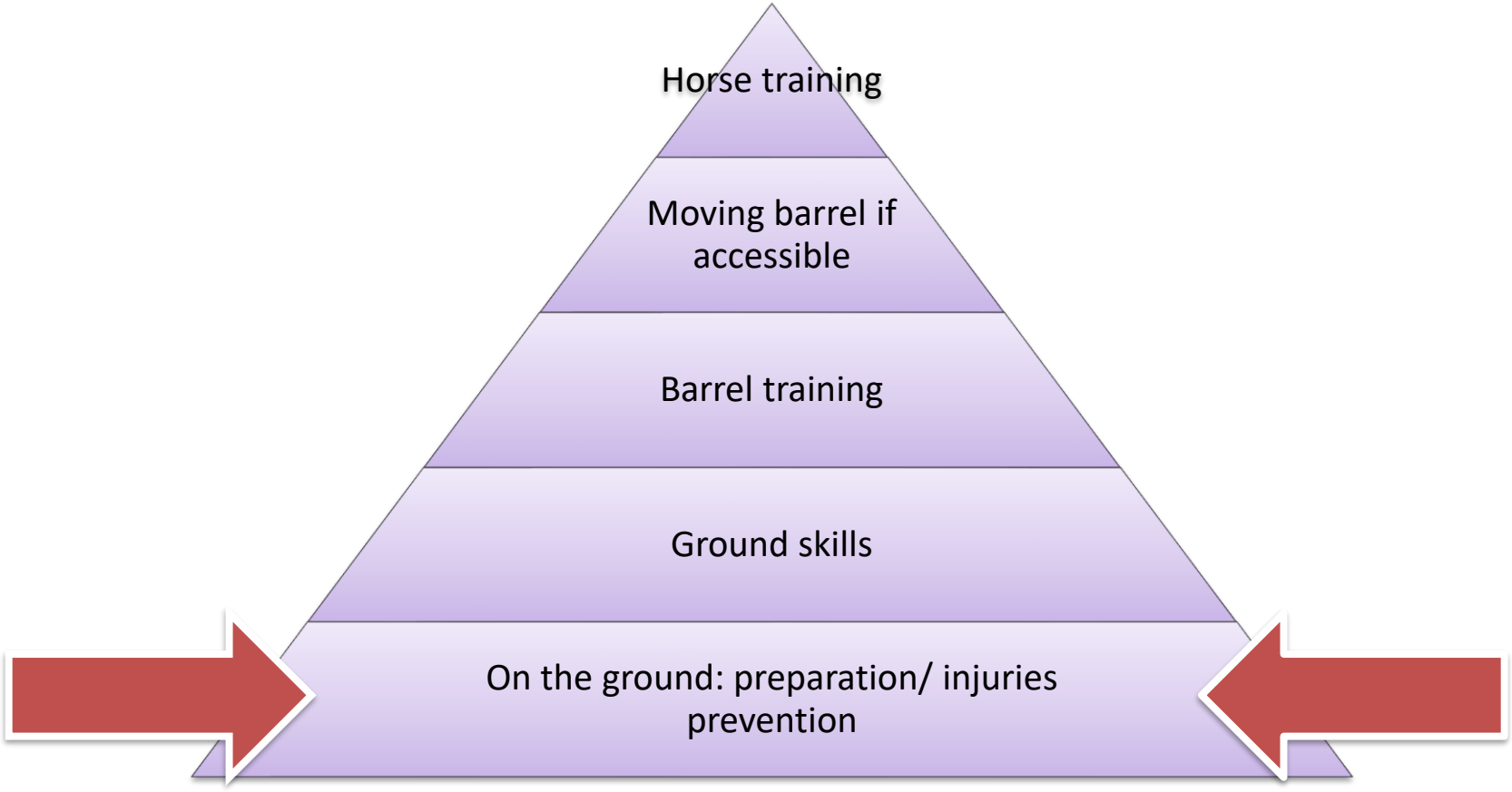
Vaulting FORUM

FEI VAULTING

How to schedule your training?

Pyramid


Horse training
Moving barrel if accessible
Barrel training
Ground skills
On the ground: preparation/ injuries prevention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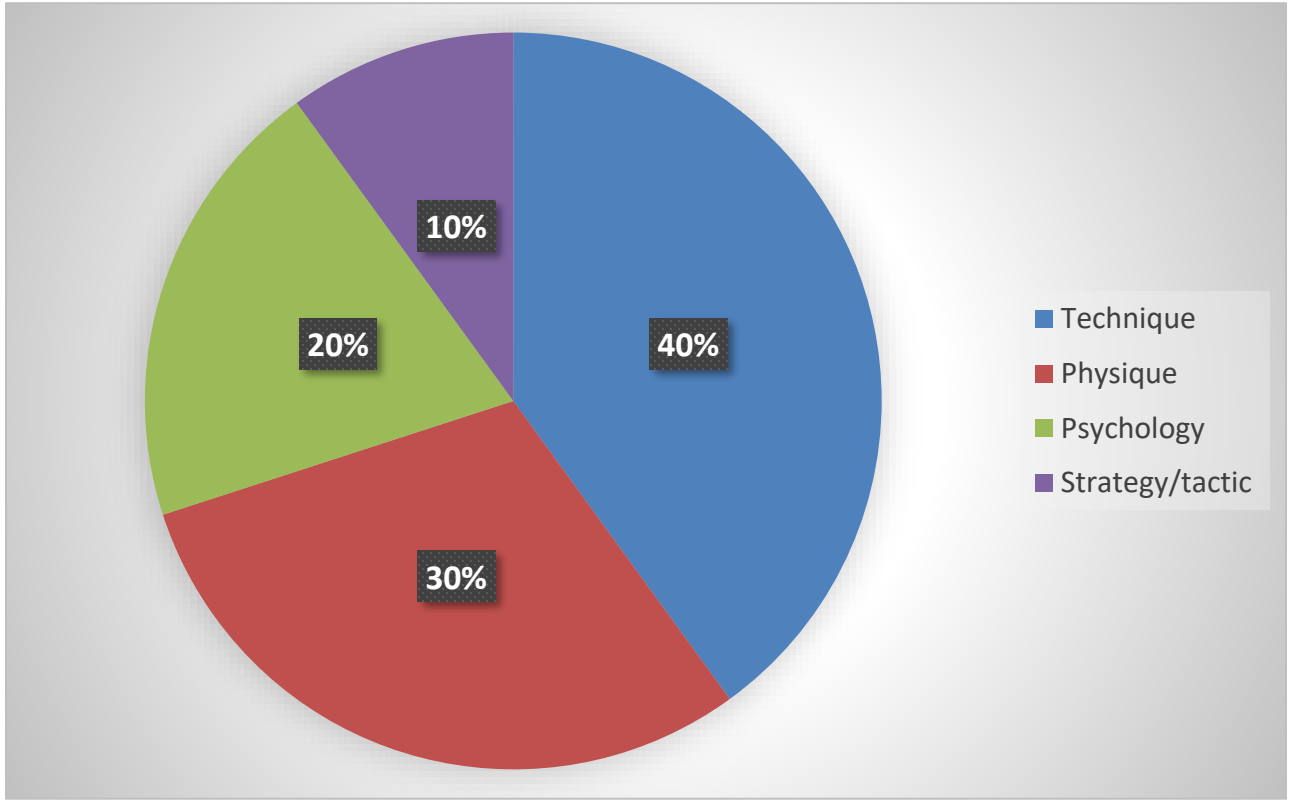
Profile of a vaulter



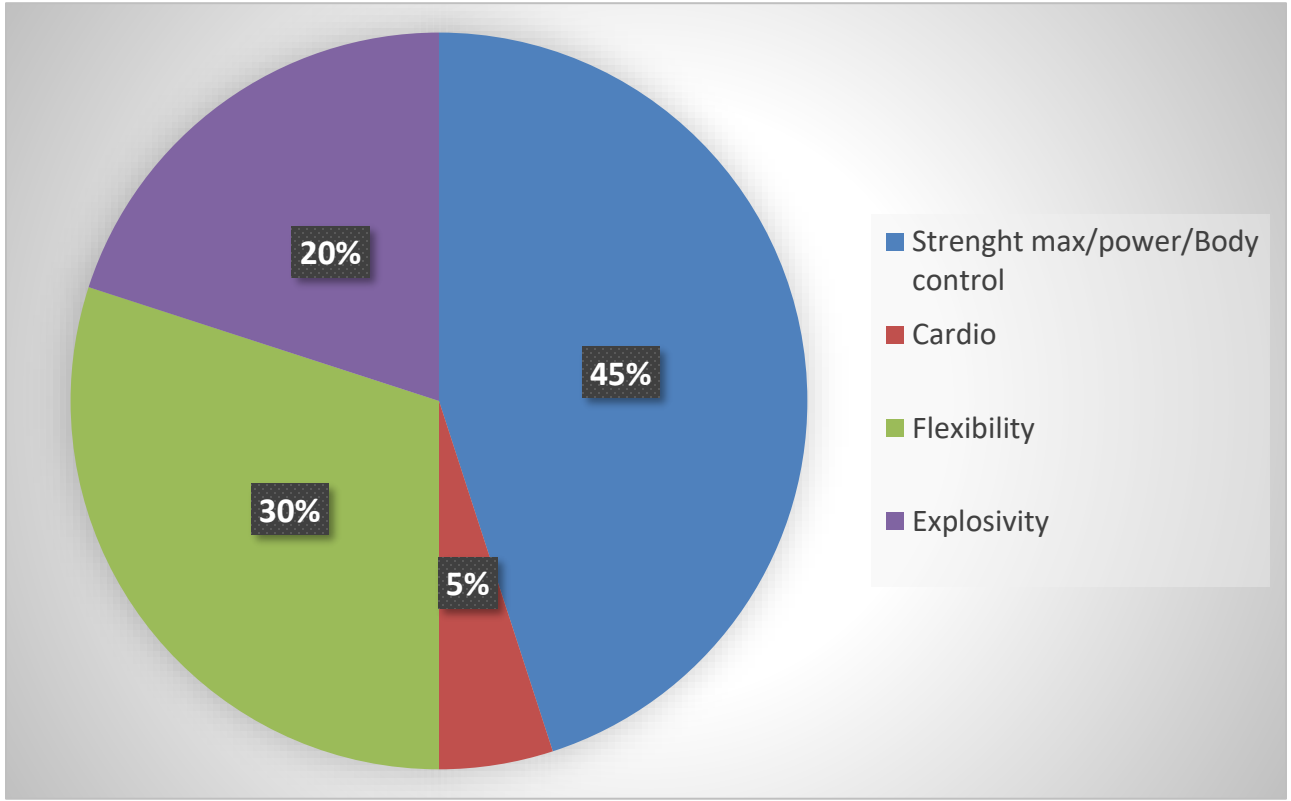
- **Technique:** like gymnastics, it is the most important factor. The execution of the moves are the most important.

- **Physical abilities:** Linked to the technique because good physical abities helps you perform with good technique.

- **Psychology:** not to underestimate. Key point.

- **Strategy/Tactique**: How are you able to manage your season taking into consideration all the different factors (horse, injuries, level…)? When performing, how is your ability to adapt on the moment?

Focus on the vaulter's physical abilities



Traning your physical abilities

- Be specific to vaulting
- Progression: regularity in the training.
- Proper warm up
- Planning your rests as well
- Everyone needs something different.
- Variety is important (Ex: not only Squats: lunges, bulgar squat…)
- Bring the notion of chaos

Establish your RM

% 1RM	Nbre Répétitions
100	1
96,9	2
93,1	3
89,8	4
87,4	5
85,8	6
82,9	7
80,4	8
78,6	9
76,2	10
70	15
65	20 – 25
60	25
50	40 – 50
40	80 – 100
30	100 – 150

The maximum weight you can lift only one time

Max strength (away from competition season)

- Targeted muscle: Focus on the shoulders ++, Glutes for all extensions, legs (PDD-Squad-Injuries).
- How to train max strength:

>80% RM

3-4 exercices (only one per muscle group)

Classic method: 3*3 reps with 90% of your RM OR 4*5 with 85%

Pyramid: Up/Down, only up, only down

- INTENTION OF SPEED.
- Breaks between sets (>2min30)

Power +++ (getting closer to competition)

- RM between 40-80 % (under 60% oriented speed over strength)
- Reps < 5-6
- How to train power:

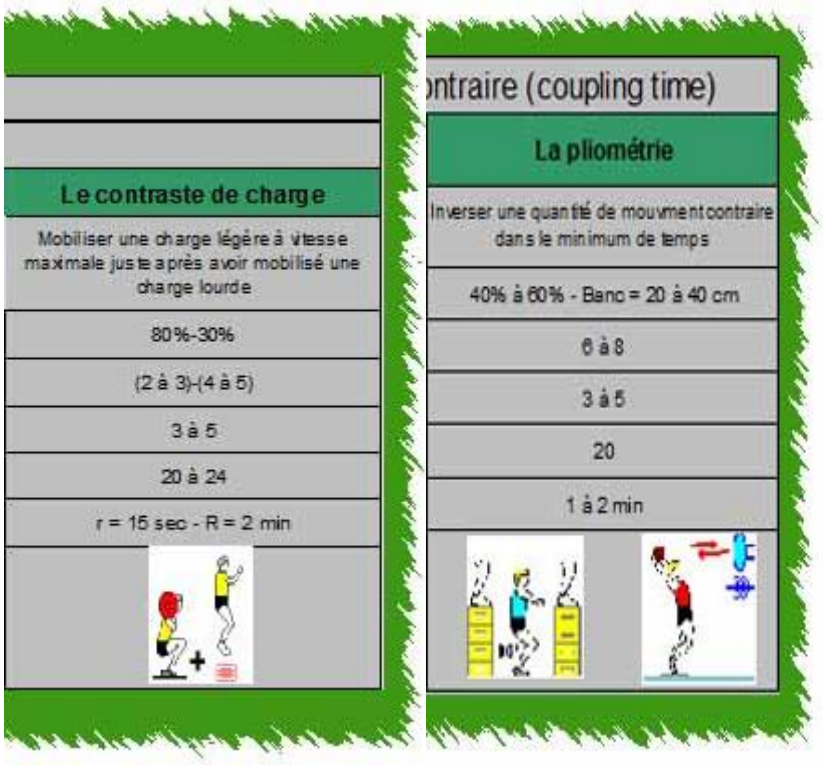
-intention of going as fast as possible.

Contrast training: 2-3 reps at 80% then 6 reps with 40%.

Ballistic: throwing medicine balls…

Plyometric: jumping push ups…

- Break around 2 mins.



Explosivity +++ (just before competitions)

- Ability to go from NO SPEED to MAX SPEED the fastest you can.

- How to train it:

-Reps: 5-6
-Long breaks (2-3 mins)
-Static dynamic: Eccentric down, 2-3 secs isometric and fast ++ up.
-Reaction: Annnnd TOP!
-Exercises from Halterophily.

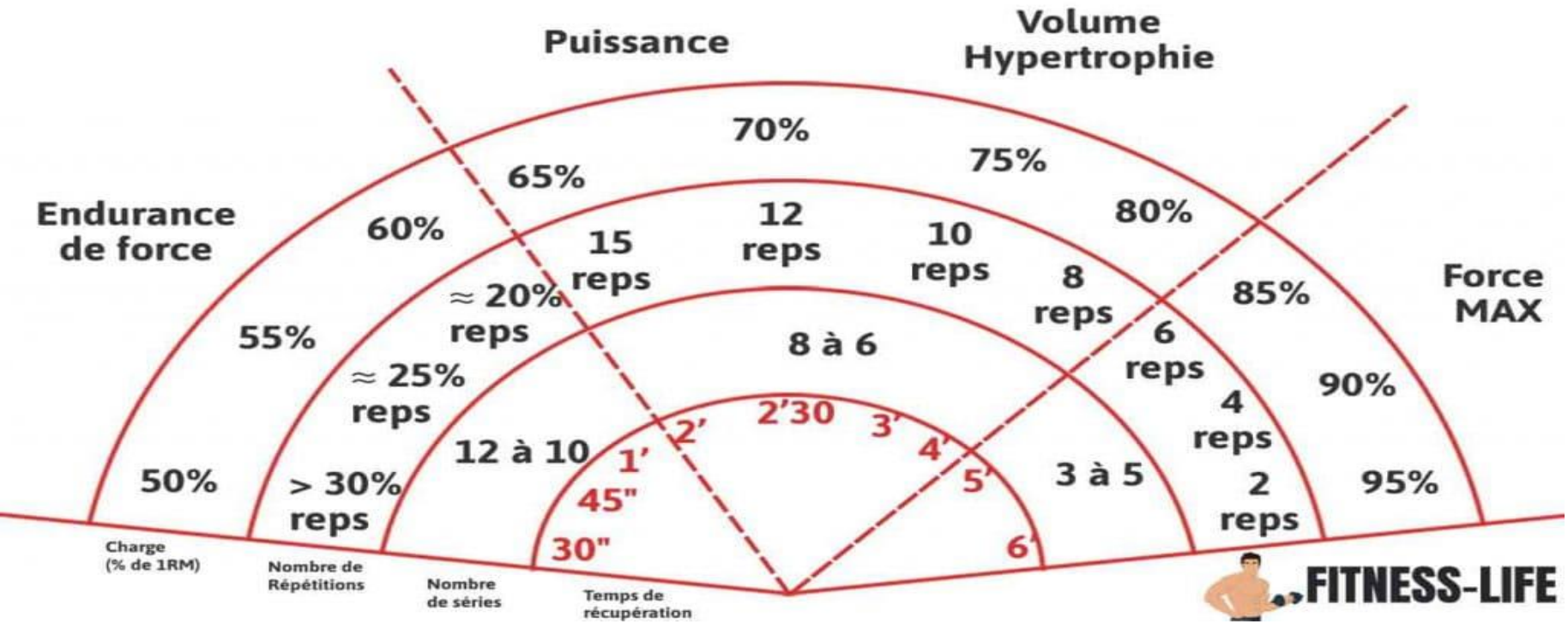
Hypertrophy

- Change the athlete morphology (more muscle).
- The other ones focus a lot more on the nerve system/ hypertrophy focuses more on muscle mass.
- Interesting in the beginning of winter trainings, less advanced vaulters, younger ones.
- How to train it:

-4 to 10 sets of 8-15 reps between 50-75% RM.

-Break between sets: 45 secs to 1 min30.

Bien choisir sa charge en musculation



Body control: Core tension/ abs

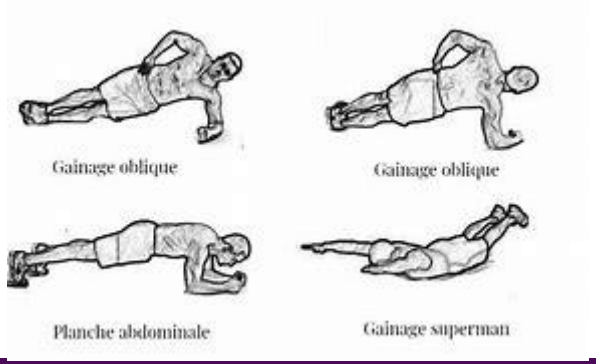
- Ideas of exercices:

Holding positions (between 2 boxes…)

Handstand perturbations

L-sits

Hanging on bar (L sit…)



Flexibility

- Passive: YES but not enough.

Good for needle if combined with strenght.

- Active flexibility: YES YES YES. That's the flexibility we use in vaulting (mills, jumps, mount, backward swings …)

- Use different techniques: contract and release ++ (most effective method studied for amplitude gain).

- Not only the legs: shoulders ++, back, glutes, rotators…

Cardio

- Running/ biking: Not the same effort as vaulting. Good, but a good runner will not be less tired after a program. Aerobic vs anaerobic?

- HIIT: High Intensity Interval training: YES

- Focus on high intensity. A vaulter is on the horse only for 1 min.

Injury prevention

- Lower body: Work on hard surface (Studies)
- Be specific to YOUR problem: lack of strenght? Coordination? Mobility?
- Respect the tissue healing delay. But avoid immobilizing too long.
- Don’t get used to straps, wraps, extra support …
- See a health pro.

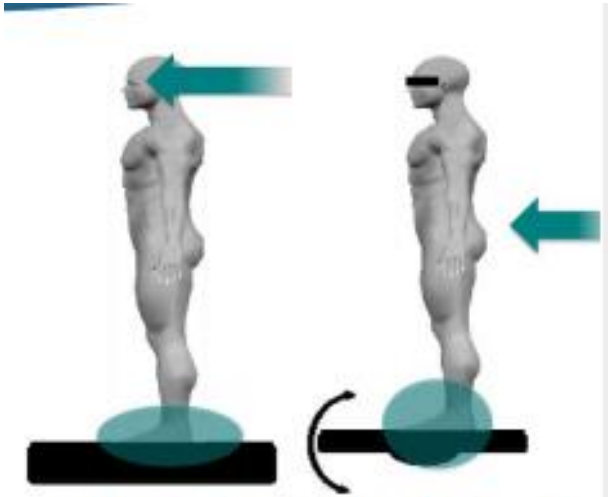
References

Eur J Appl Physiol (2012) 112:1577–1585
DOI 10.1007/s00421-011-2121-8

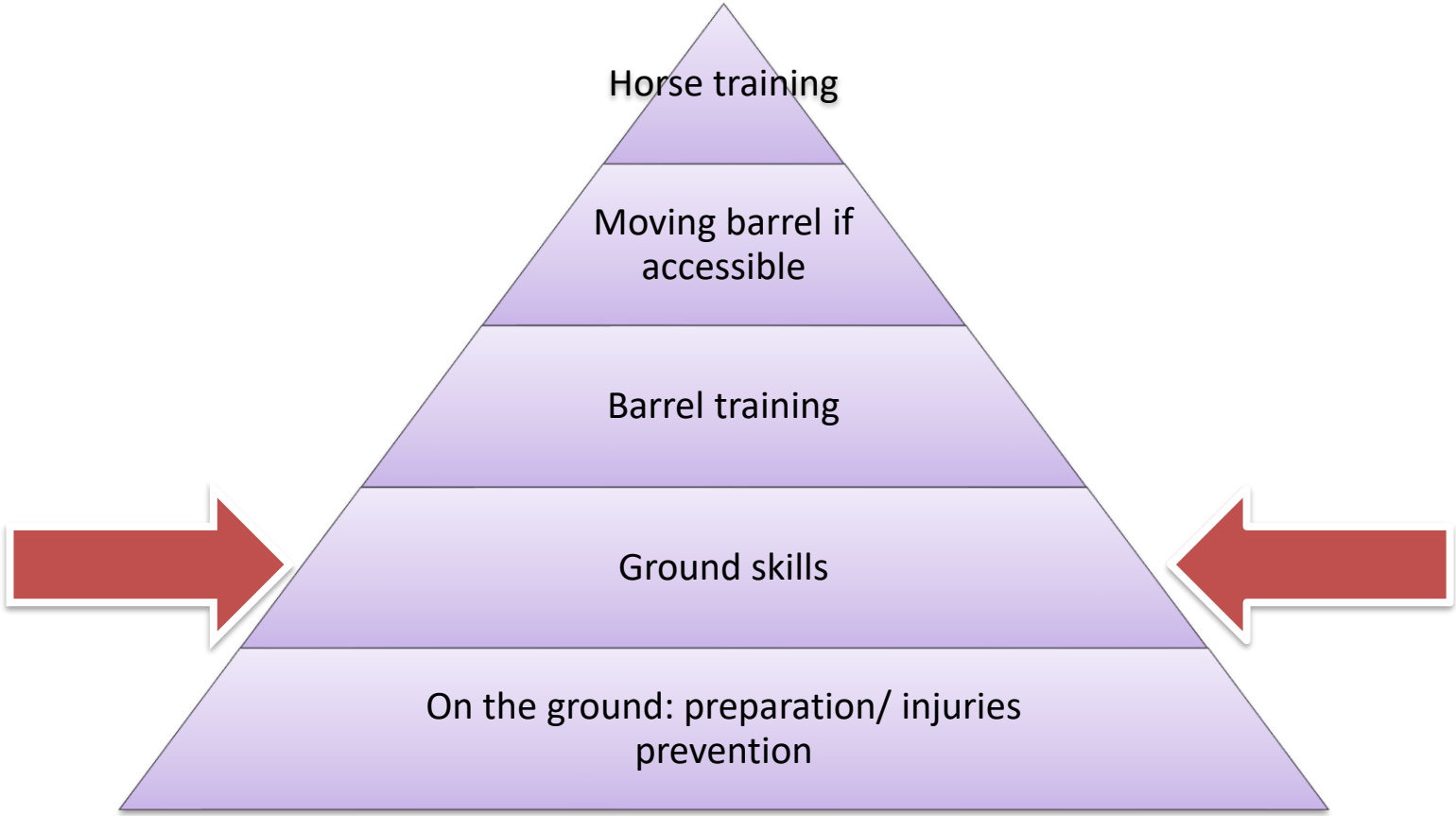
ORIGINAL ARTICLE

Ankle proprioception is not targeted by exercises on an unstable surface

Henri Kiers · Simon Brumagne · Jaap van Dieën · Philip van der Wees · Luc Vanhees



Hertel & Corbett 2019; Lubetzky et al. 2017; Kiers et al. 2012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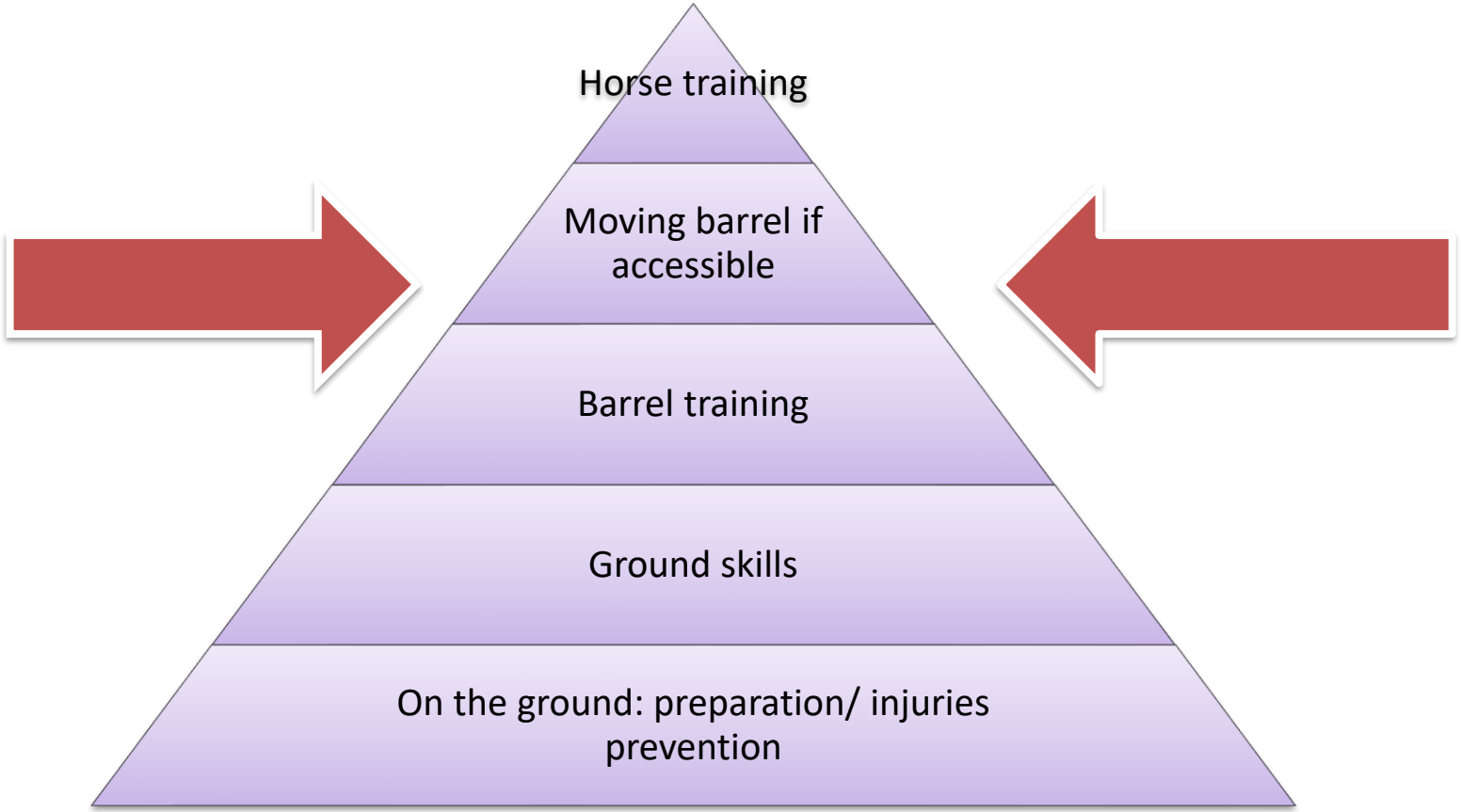
-Creativity
-Push your limits
-Discover possibilities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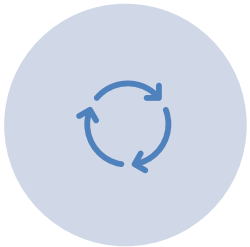
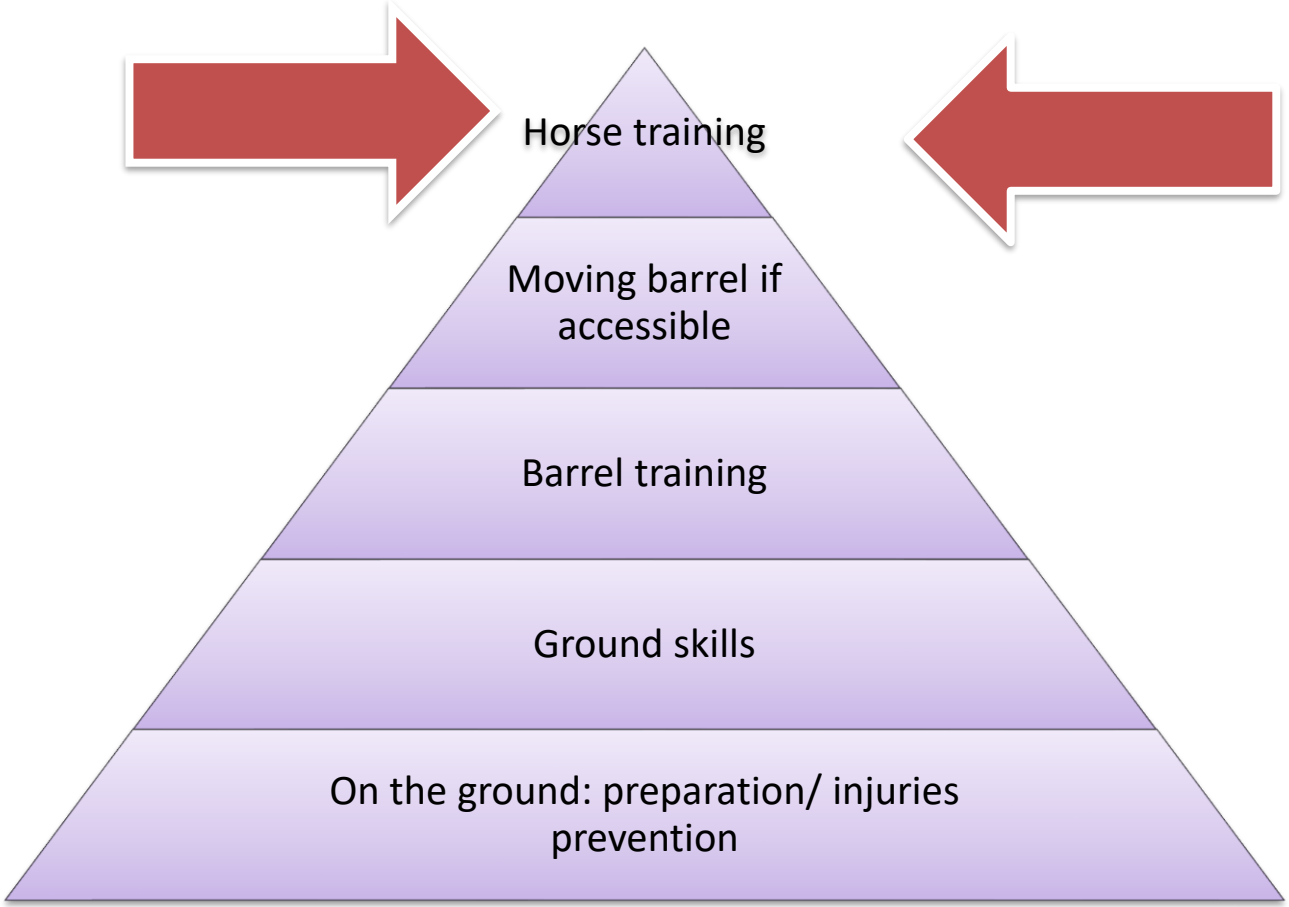
Working on the skills/ playing around.

Technical training: Focus on some elements and prepare the session on the ground.



Repeat the programs ++++: Repetition is the KEY.

Hide the mistakes, find your plan A/B/C …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Horse training

- Only if everything before was correctly done. The horse is not a training tool but our performance partner.

- Mistakes happen **but** if it happens because THE VAULTER wasn't properly prepared, it's **NOT EXCUSABLE.**

- Horses don't need to canter longer because you can't perform an element. Make sure you did all the steps before. **BE EFFICIENT.**

- Make sure your horse is also ready for doing what you want. Their **WELLFARE** comes before your « cool move ».

- A vaulter must be **properly warmed up** for the horse training.

BUT ALSO: SLEEP

In summary, there is evidence of a relationship between chronic suboptimal sleep patterns and the risk of musculoskeletal pain and sports injury. The amount of sleep that has been consistently found to be associated with increased risk of injury is ≤7 h of sleep on a chronic basis, which increases injury risk by 1.7 times
Conversely, those who reported >8 h of sleep a night had their injury risk reduced by 61% (odds ratio, 0.39) as compared with those who had ≤8 h of sleep

FOOD

“You are what you eat”

A bit of all.

Not eating isn’t the key: Otherwise, your body destroys the muscles to get energy.

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Squads

What changed for Squads in the guidelines?

- No more requirement of triples:

-you now have the possibility to perform a squad freestyle without triples.

-CoH will lower your score if your horse struggles to carry it. If you want a good score, don’t overload your horse.

-3min30: Our goal? What can this change in the working load of your horse?

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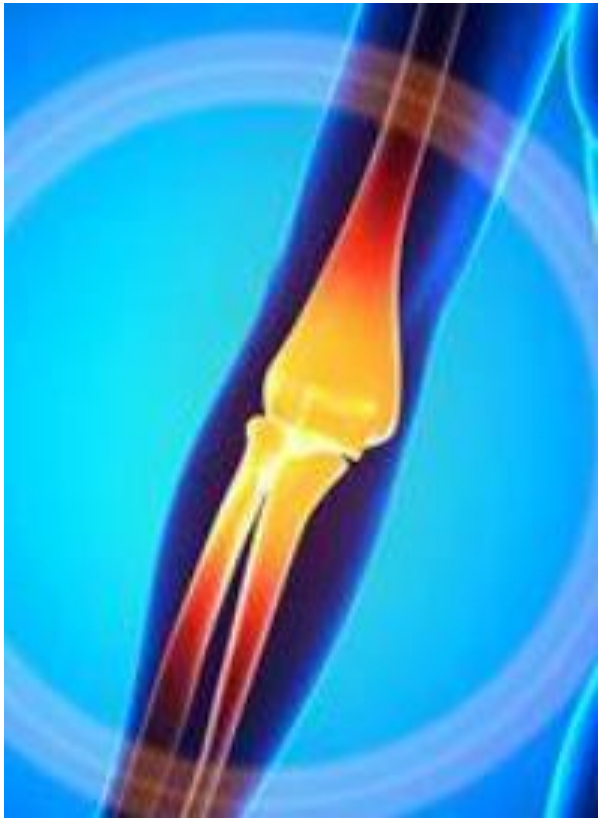
Handstand

Absorption and wrist strategy

During perturbed and unperturbed balance in handstand, the most prevalent control strategy was a wrist strategy, which was employed for more than 75% of the time in balance.

Bent elbow

Gautier et al. [5] explains that the flexion in elbow joints enables the gymnasts a quick lowering of center of gravity in case of extreme imbalance, similarly as the knee joints fulfills this function in upright position.



Head position in gymnastics?

- (…) in artistic gymnastics competitions, **the flexion of head was not considered as a mistake**, moreover it was the other way round.

- (…) we moved towards the head positioned as **a continuation of the neck**.

- We agree with the opinion that head **should not be fixed in any extreme position** (bending forward, backward). For a gymnast the visual contact with the ground

(BALANCING IN HANDSTAND ON THE FLOOR Petr Hedbávný, Jana Sklenaříková, Dušan Hupka, Miriam Kalichová Faculty of Sports Studies, Masaryk University, Brno, Czech)

Shape required

TABLE 1 - Agonist muscle groups and their actions associated with maintaining the correct handstand posture

Joint action/ Movement pattern	Muscle Groups	Related function in the performance of the handstand
Planter flexion	Gastrocnemius, Flexor digitorum longus, Flexor hallucis longus, Peroneus (fibularis) longus and brevis, Plantaris, Soleus, and Tibialis posterior	Toe point
Knee extension	Rectus femoris, Vastus medialis, Vastus lereralis, Vastus intermedius.	Maintaining straight legs, as well leg thrust from the lunge
Posterior pelvic tilt	Rectus abdominis (predominantly), Internal and External oblique abdominals, Transversus abdominis.	Flattening out of the lower back
Extended hips, with slight external hip rotation	Gluteus maximus, medius, and minimus	Open hips when combined with posterior pelvic tilt, and the kick-up.
Shoulder girdle abduction	Serratus anterior, Pectoralis minior	Round back.
Shoulder girdle elevation	Rhomboids, Trapezius, Levator Scapulae	Push through the shoulders, so there are no gaps between arms, shoulders and ears.
Slight cervical extension	Rectus Capitis posterior major and minor, Obliquus capitis superior, Spinalis capitis.	The slight tilt of the head so the gymnast can peek over his/her eye brows to spot the anchor point in-between the hands.
Wrist and finger flexion	Flexor carpi radialis, Palmaris longus, Flexor carpi ulnaris, Flexor digitorum superfacialis, Flexor digitorum profundus, Flexor pollicis longus	Employed during balance through the 'wrist strategy' (1,4,2)

Summary

If the **oscillations** are so big that the gymnast's shoulder girdle is not strong enough to correct them **with help of wrist and shoulders**, then **hips and elbows follow.**

Head in continuation of the spine. No extreme position

Proper core activation (back+++)

Common mistakes

In vaulting:

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Head down in freestyle

In the free test

- Vaulters have different shapes, so we can't refer exactly to what was presented.

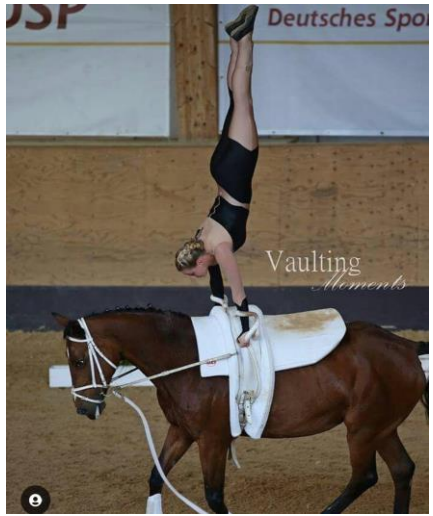
- **Here are the key elements to focus on:**

  -Open shoulder angle

  -CoG on top of supporting area

  -Stability/absorbtion of legs

- Stability and absorbtion in the back.



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Thank you