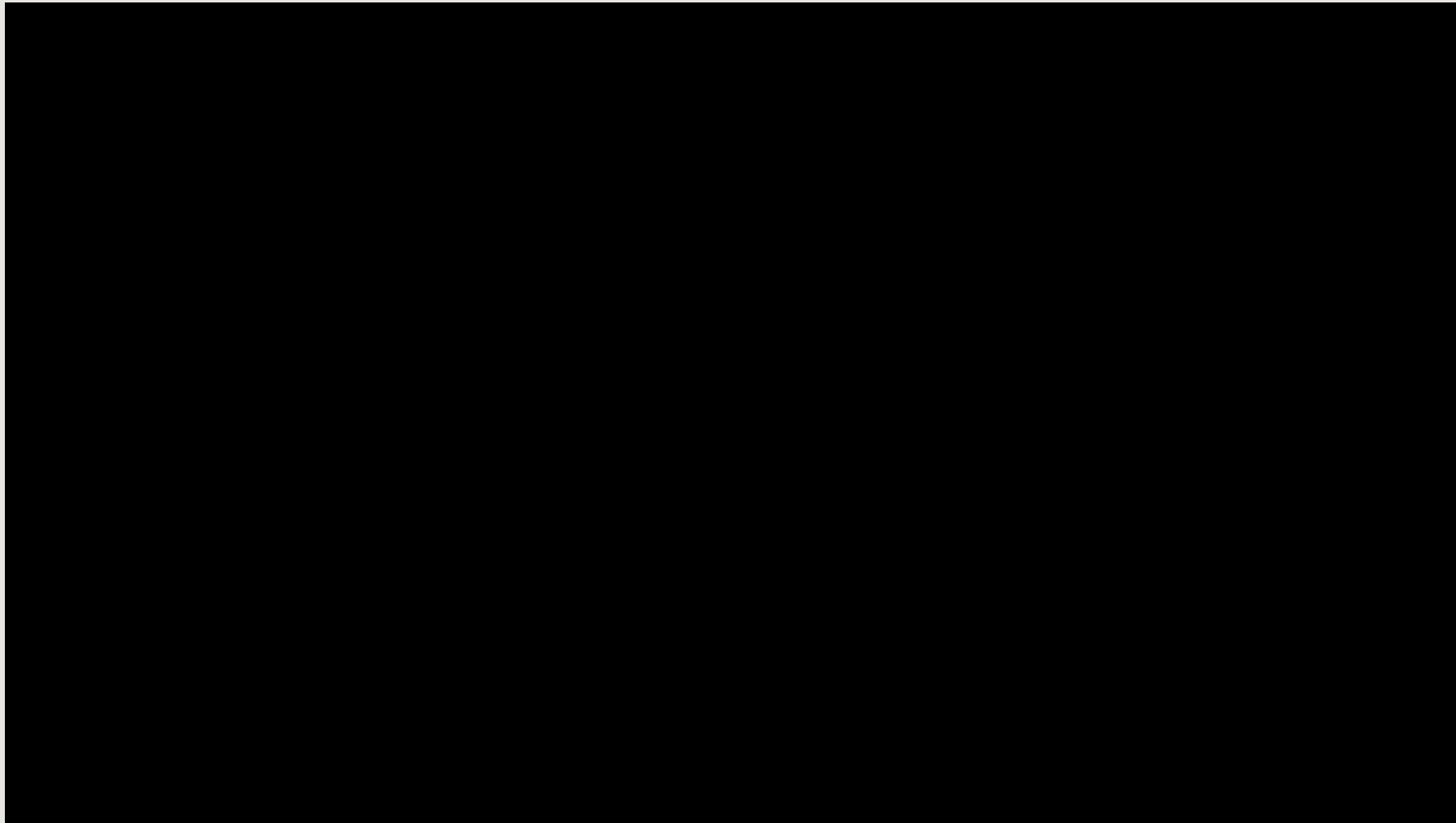

Výživa sportovců po zranění a v prevenci zranění

bp1819 Základy sportovní výživy

Top 3 tipy pro zraněného sportovce z pohledu výživy

**TOP 3 NUTRITION
TIPS FOR THE
INJURED ATHLETE**

Je možné snížit úbytek svalové tkáně u zraněného sportovce?



Jaké používat suplementy u zraněného sportovce?

**WHAT SUPPLEMENTS
ARE USEFUL FOR
INJURED ATHLETES?**

Nutrition recommendations to minimise muscle loss when injured

- 1** First and foremost, avoid nutrient deficiencies (including energy)
- 2** **Maintain energy balance**
- 3** Maintain a higher protein intake
- 4** Aim for 2.0-2.5 g protein/d/kg body mass



- 5** There is evidence for the efficacy of some nutraceuticals, e.g. omega-3 fatty acids

Energy balance plays an important role in the recovery process



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Energy balance and injury

Negative balance
(Eating too little)

Positive balance
(Eating too much)

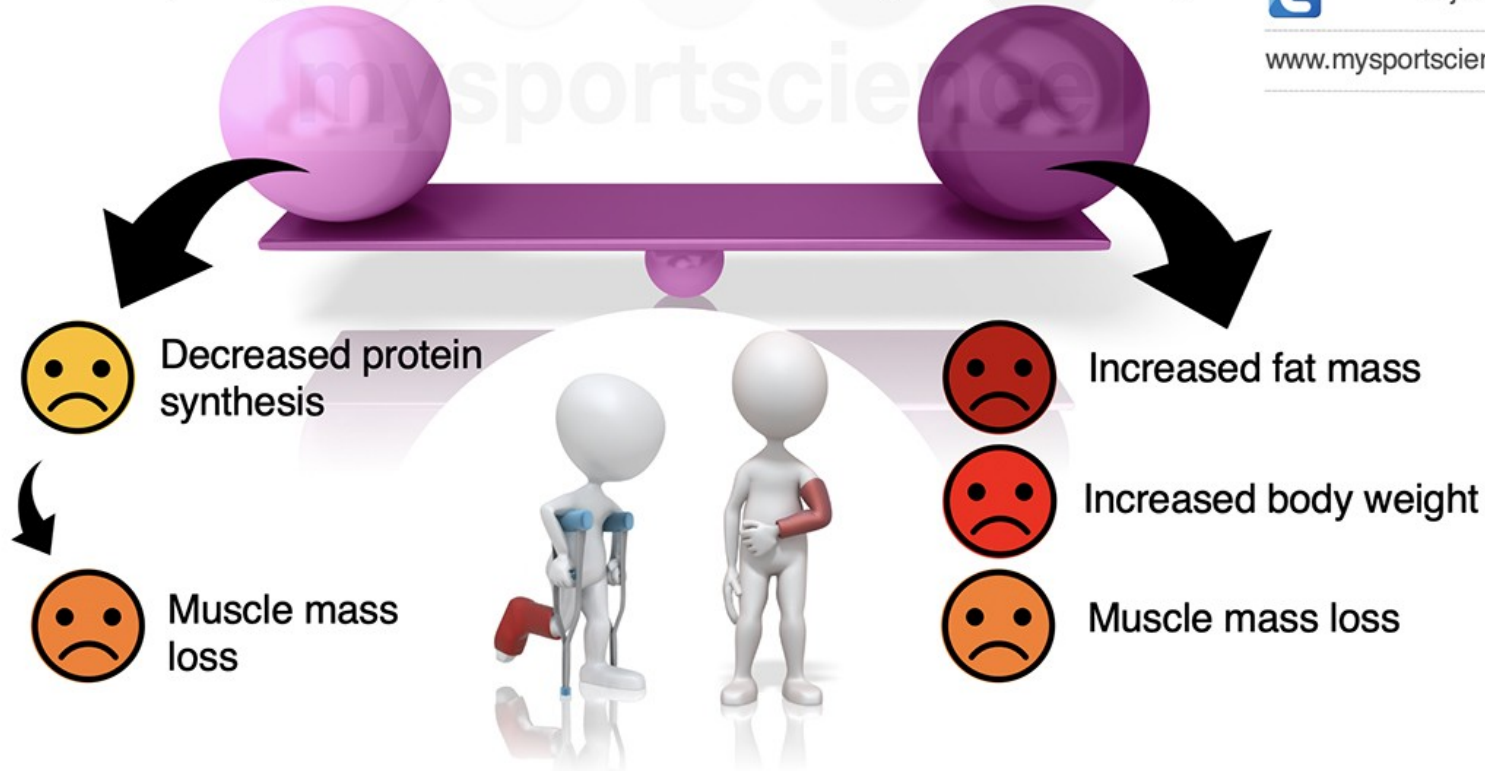


Unlock the Power of Science to Optimise Performance



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Nutrition for recovery from **muscle** injury



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Protein intake

20g of high quality protein (0.3 g/kg/meal) maximally stimulates muscle protein synthesis – aim for this at EVERY meal

Exercise the muscle as early as possible in the rehab process
(pool-work and electrical stimulation of the muscle)

Other nutrition

Creatine may help 10g/d for 3 weeks then 2 g/d beyond

HMB?
Omega 3 fatty acids?

Based on presentations by
Kevin Tipton
Stuart Phillips
Keith Baar



Energy balance

Avoid both negative as well as positive energy balance

Nutrition for recovery from **tendon** injury



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Protein intake

20g of high quality protein (0.3 g/kg/meal) maximally stimulates muscle protein synthesis – aim for this at EVERY meal

Rehab exercises 3 x 10 min with 6h of rest
(3 times per day). Start from walk, progress to run.



Based on presentations by
Kevin Tipton
Stuart Phillips
Keith Baar

Gelatin

5 g gelatin with 500mg Vitamin C 30-60 min before activity

Energy balance

Avoid both negative as well as positive energy balance

How to use gelatin to promote collagen synthesis



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To treat injuries

Gelatin: a food source with similar amino acids found in collagen.

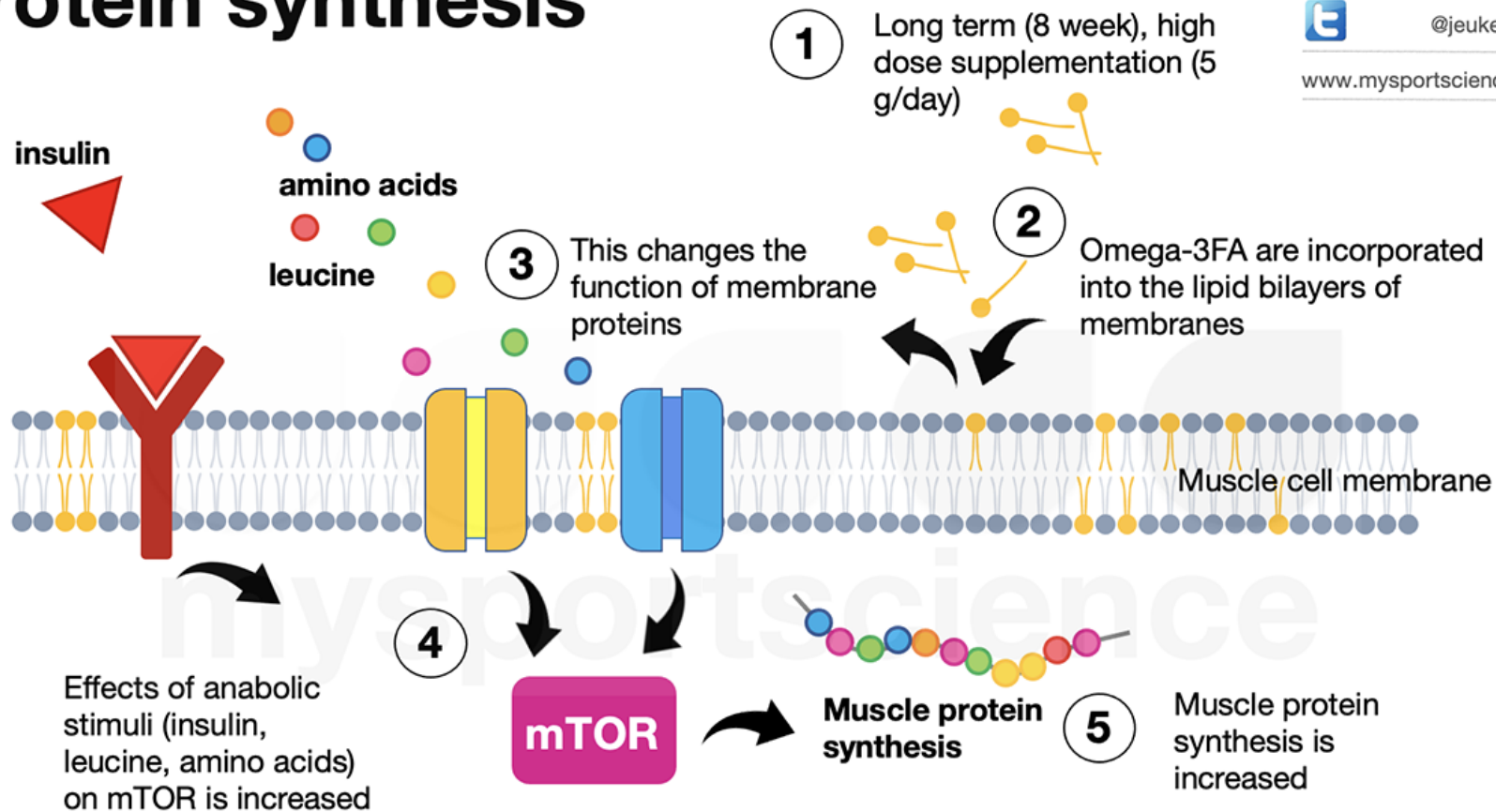


Consuming **15 grams of gelatin** one hour before 6 minutes of jump rope resulted in a 2-fold greater increase in collagen synthesis than intermittent exercise for 6 minutes on its own.

Ingest gelatin **1 hour before** 5-6 minute protective session
At least 6 hours before or after other training

Jumping rope for 6 min with gelatin resulted in 2-fold greater increase in collagen synthesis than jumping only.

Omega-3 fatty acids and protein synthesis



Omega 3 fatty acids

ALA

Alpha linolenic acid



Nuts (walnuts) and seeds (flaxseeds, chia seeds), as well as meat

EPA

Eicosapentaenoic acid



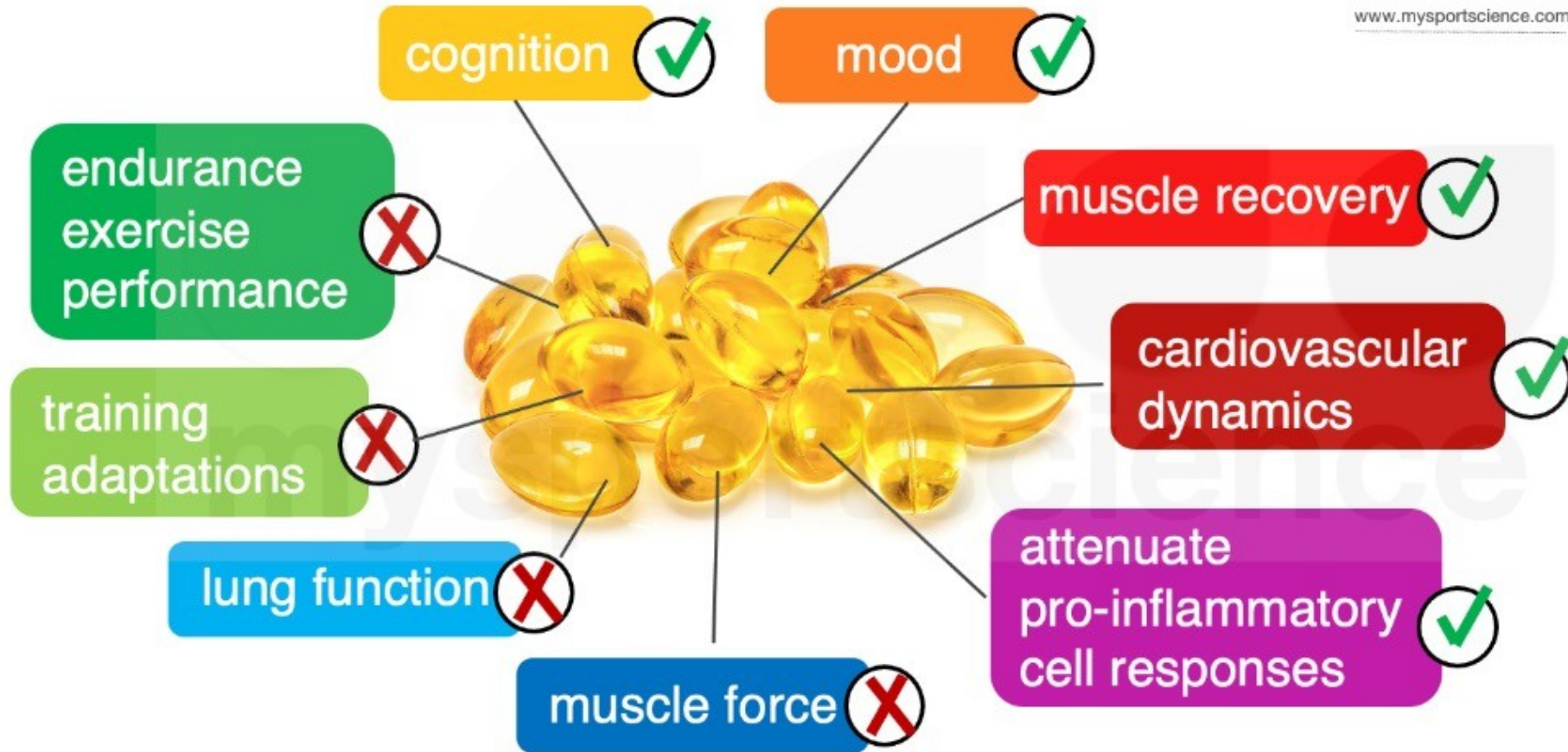
DHA

Docosahexaenoic acid

Salmon, sardines, mackerel, cod liver oil, herring, tuna, anchovies



Evidence for fish oil for athletes



Shrnutí

1. Energetická bilance – kalkulace pro základní EV.
 2. Pravidelný a adekvátní příjem bílkovin – v doporučené dávce alespoň 1,6 g/kg TH rozložené do 3-5 jídel/den.
 3. Aktivace sportovce v co nejkratší možné době – v závislosti na zranění.
 4. Podpora suplementací – omega-3 MK, kolagen + vit. C, proteinové přípravky a další suplementy s obsahem energie v podpoře vyrovnané EB.
-

Zánět – „*friend or foe*“?

