



# Performance Analysis for Training & Coaching

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## **Team Jumbo-Visma :**

27 athletes from 8 different nations

4 trainers/ performance coaches

weekly performance meetings

*“to improve every day”*



# “To improve every day”

- 27 individuals with different tasks within the team.
- All riders have a personal development plan (physical & personal) and a year plan.
- Different physiologies means different needs in training.

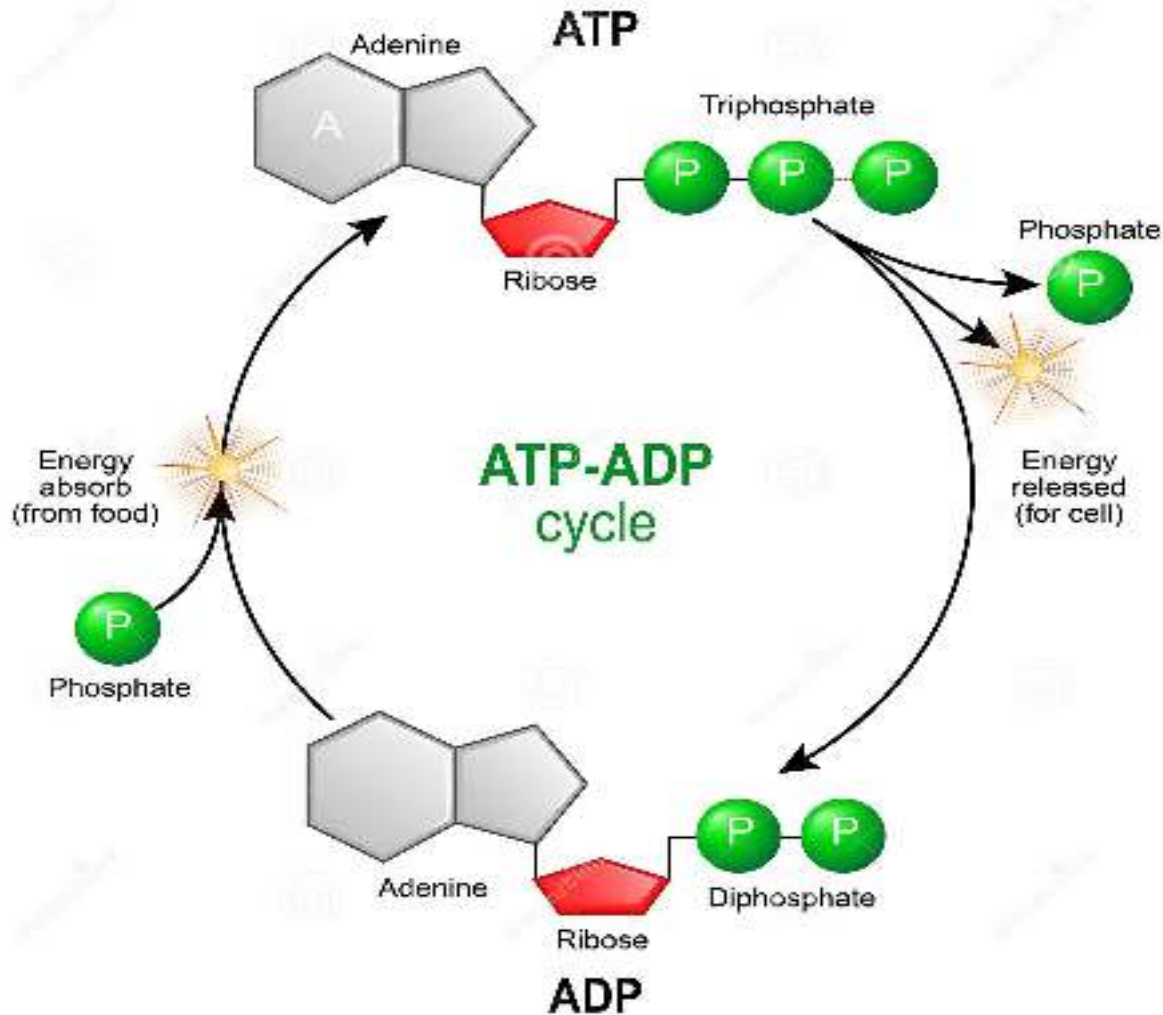


# To increase performance = training meets needs

- What are the needs, what are we targeting?
- What's happening inside the body?
  - > metabolic profile tests
- How do we target training?
  - > which model do we use?

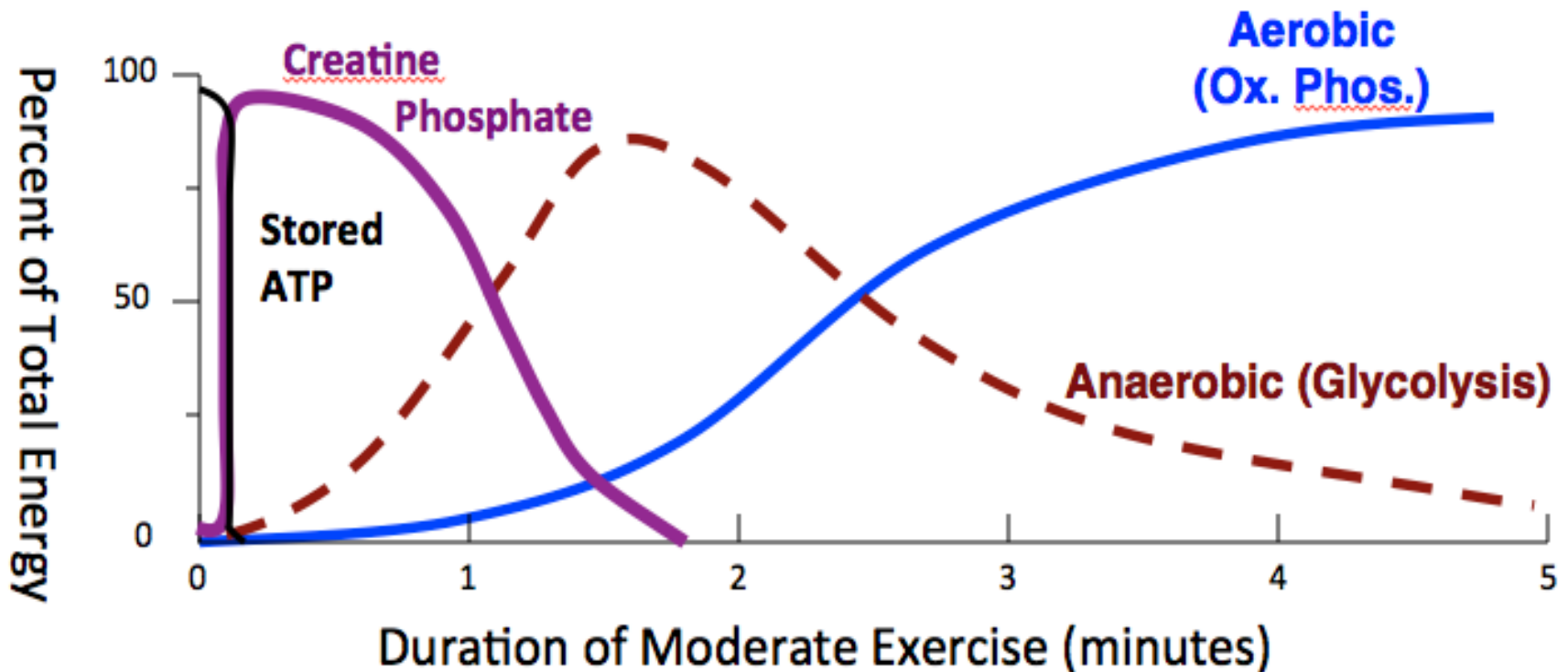


# ATP: energy for all life processes





# Time Course of Energy Sources





# What are we targeting?

- VO<sub>2</sub>max testing in the lab in Nov./ Dec.
- Metabolic profile of the riders to determine:
  1. Aerobic performance -> VO<sub>2</sub>max (ml/min/kg)
  2. Anaerobic performance -> VLamax (mmol/l/s)-> lactate building rate or glycolytic rate/ power.



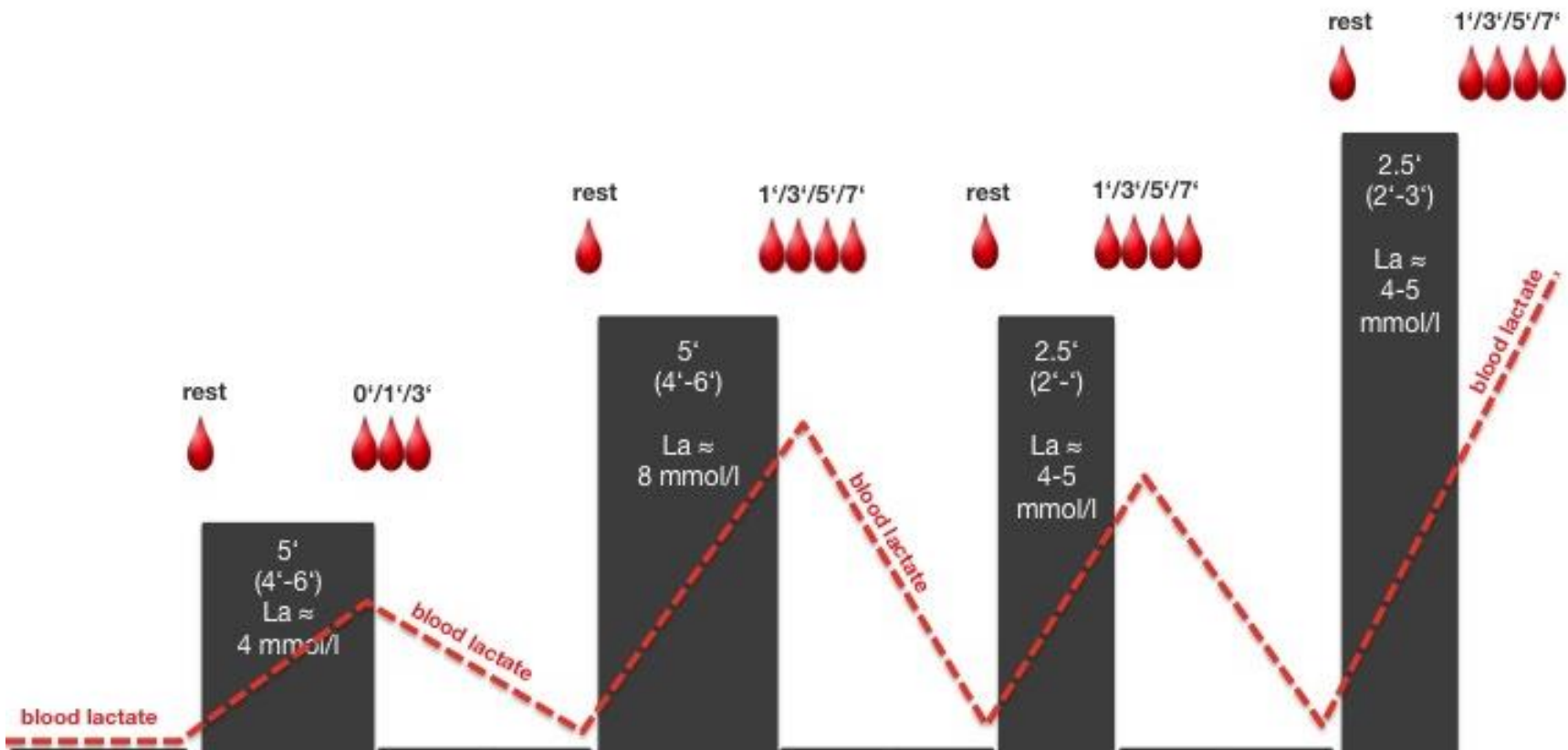
Key measures to target training: lactate testing and power measurements.







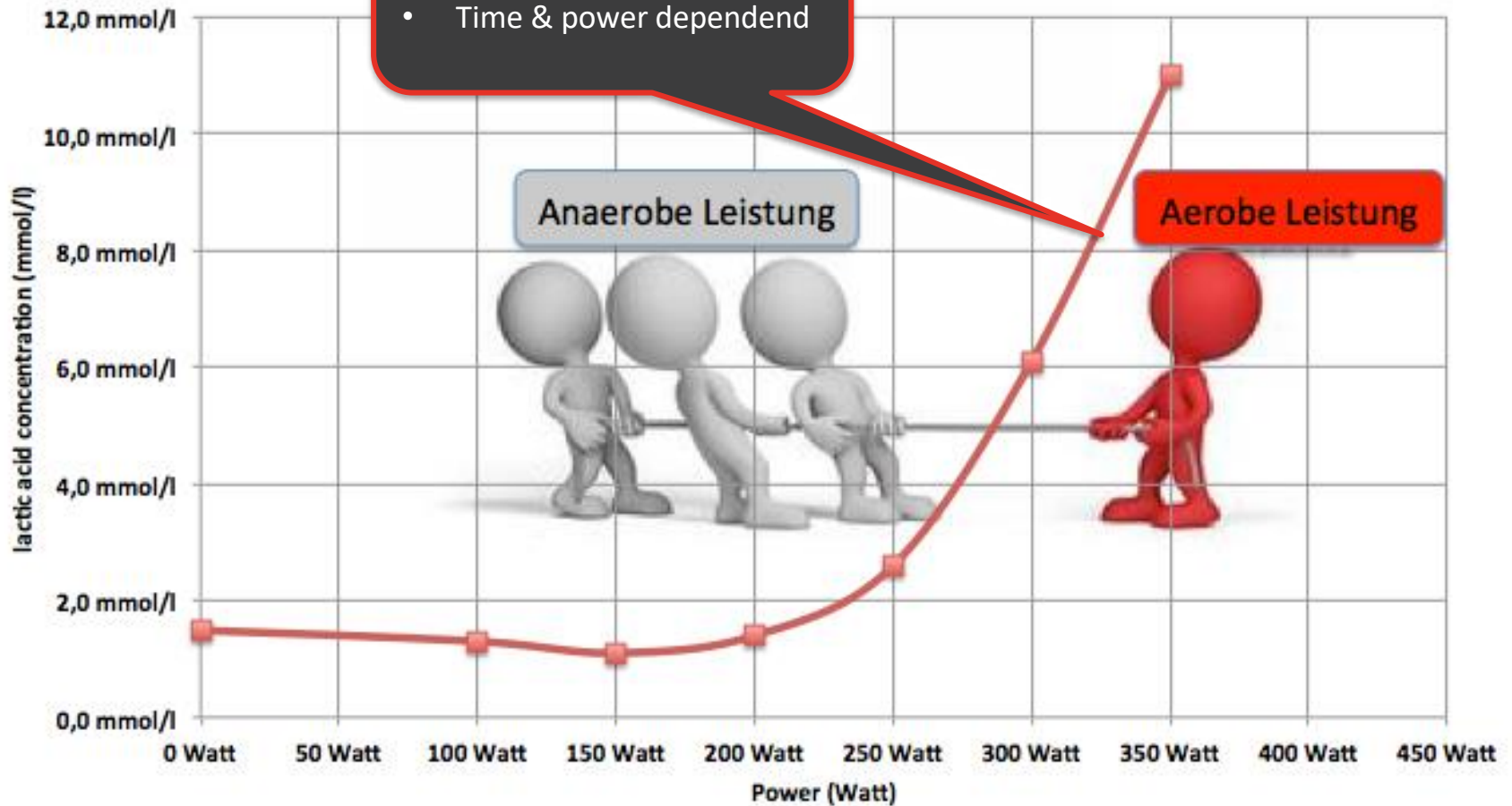
# 4x-phase intermittent load test





$$La_{bl} = f [VO_{2max}, VL_{amax}]$$

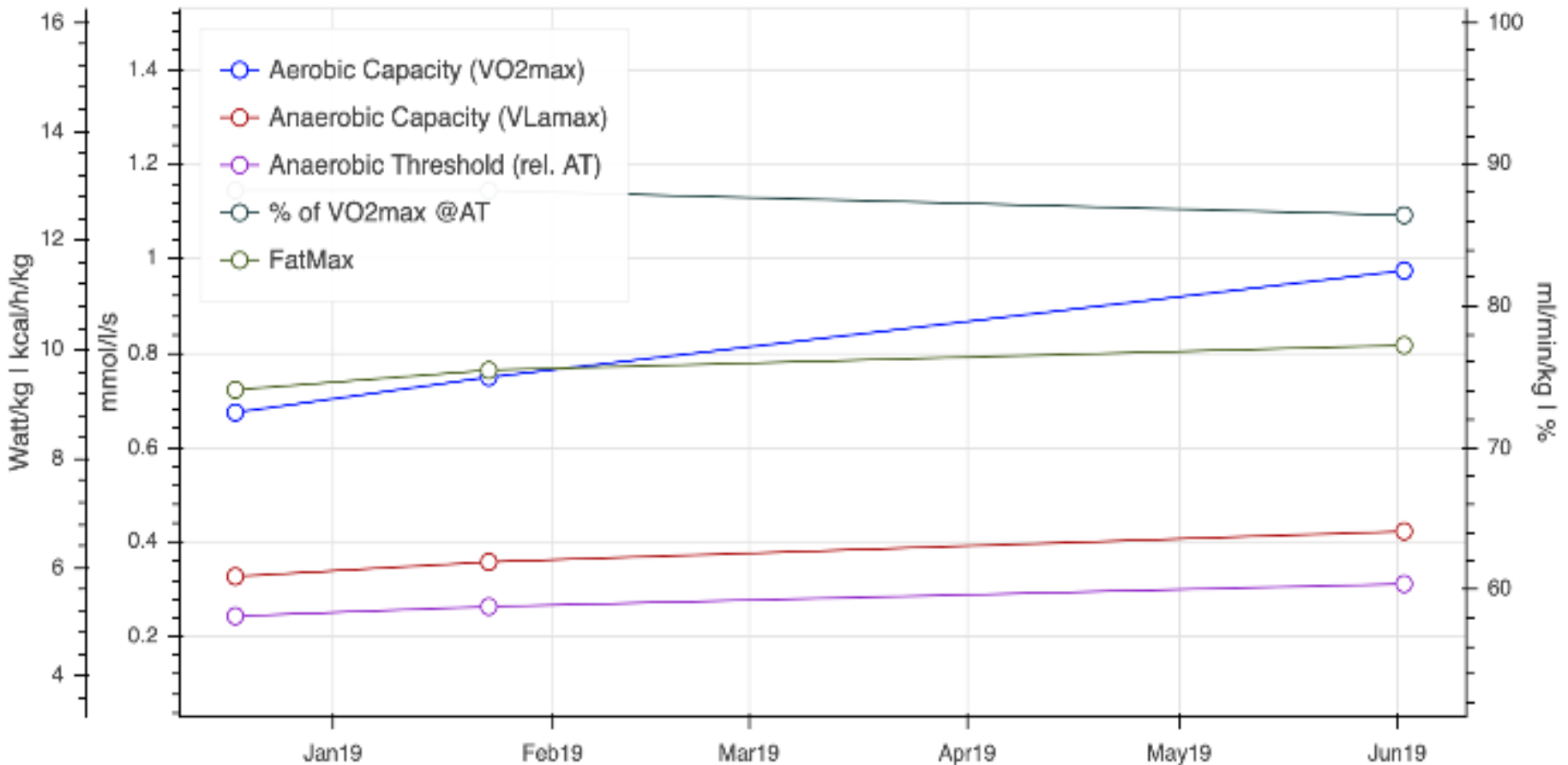
- Lactate production
- Lactate clearance
- Lactate transport
- Time & power dependent





# Performance development in VO2max and VLamax

performance development from 18-12-2018 to 02-06-2019





# Conclusion

- *Training over a season is a continual building to an objective but constantly modifying one or both of these capacities (Aerobic performance/  $VO_{2max}$  versus Anaerobic performance/  $V_{Lamax}$ ) over time to reach the desired balance.*





- Olbrecht, Jan- The science of winning

