

Pre-transport diet affects the physiological status of calves during transport by road and ferry

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Long-distance transport of Irish dairy calves

~120.000 calves/year

“Surplus calves”

~2-6 weeks old

≥ 48 h transport



Long-distance transport & diet

- Pre-weaning
- Prolonged fasting
- High energy demands



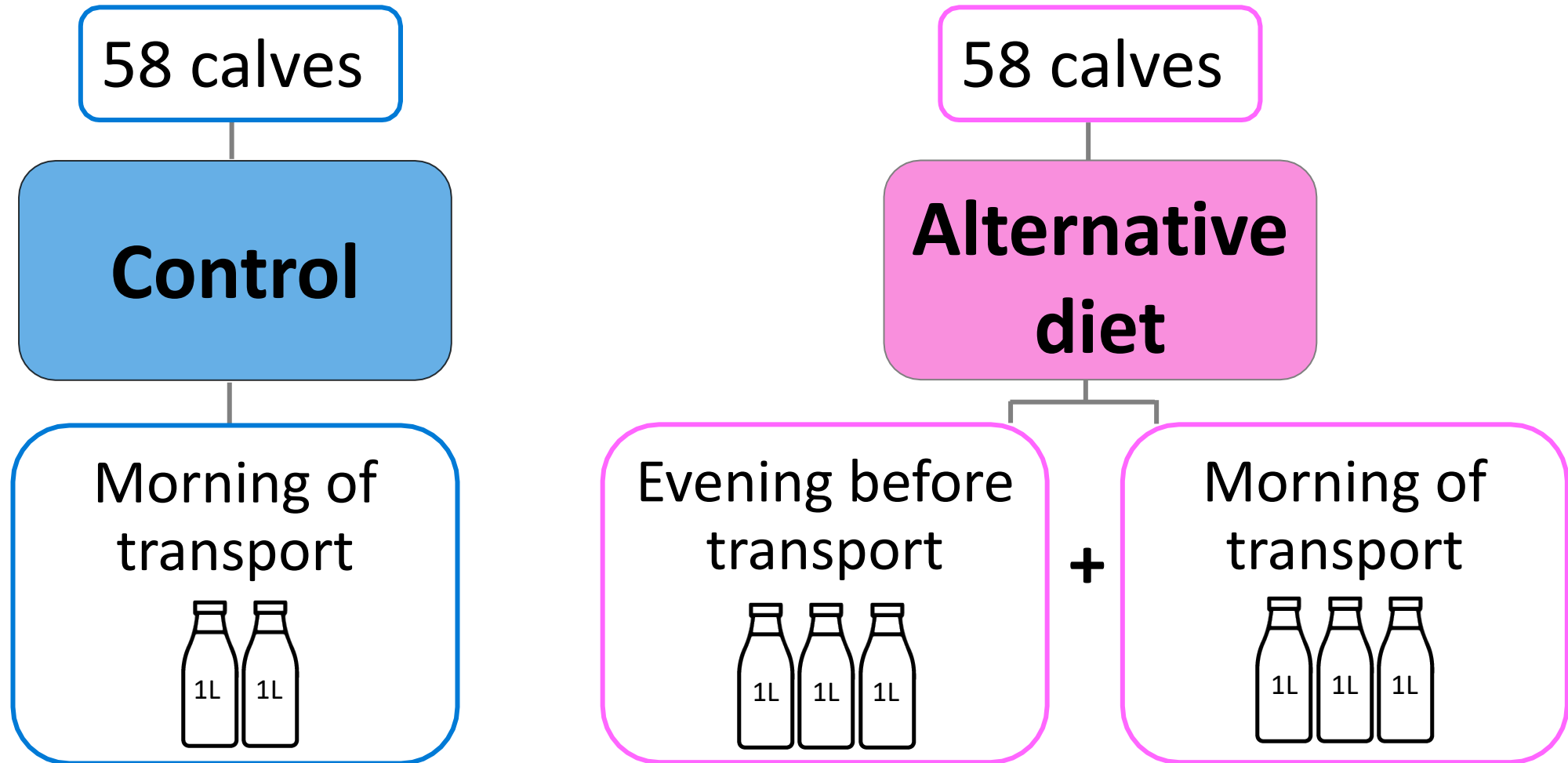
**Dehydration,
negative energy balance,
hunger**

- Positive effects of feeding milk replacer
- But: digestive upset?
- Ferry-road transport?

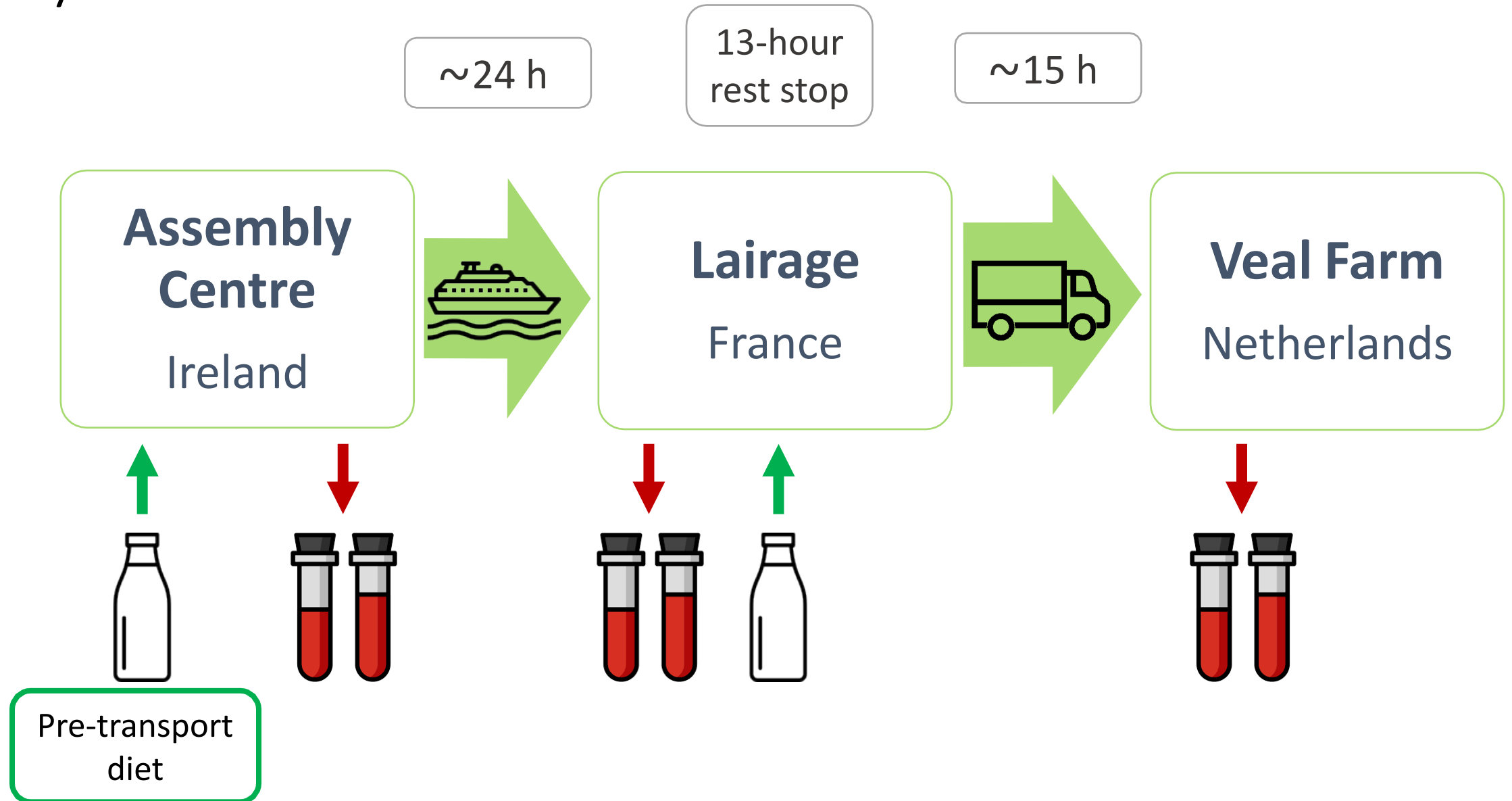


Can feeding more milk replacer before transport improve the physiological status of calves?

Pre-transport diet treatments



Study outline



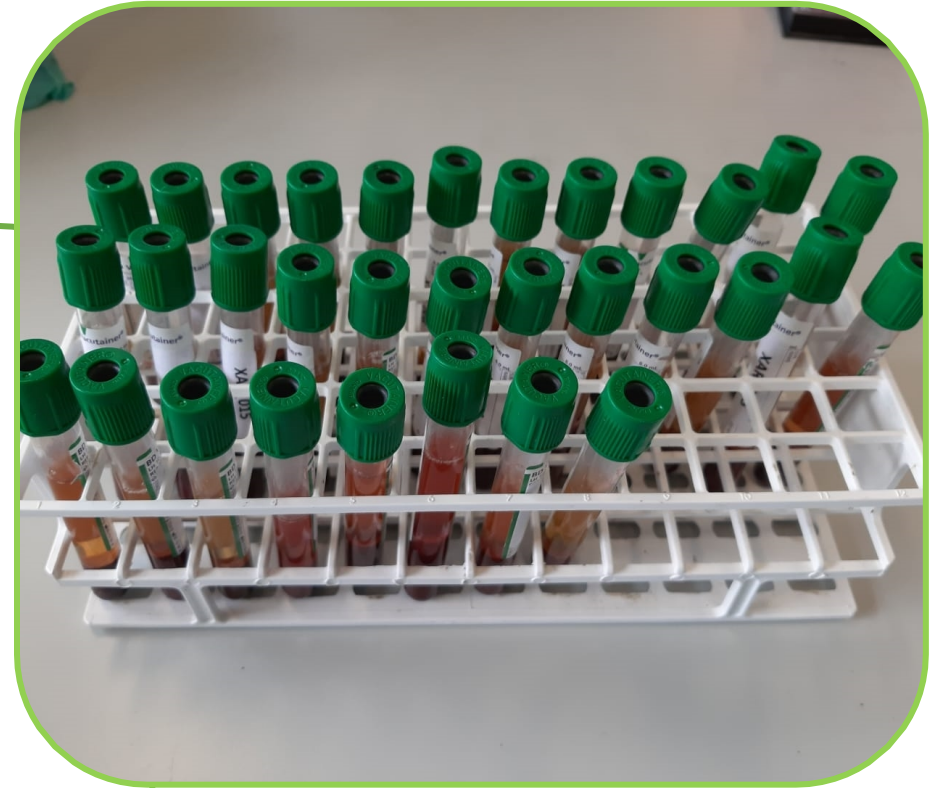
Study animals

- 116 calves
- male
- mean age 29 days
- 40% FRX
60% dairy-beef
crosses

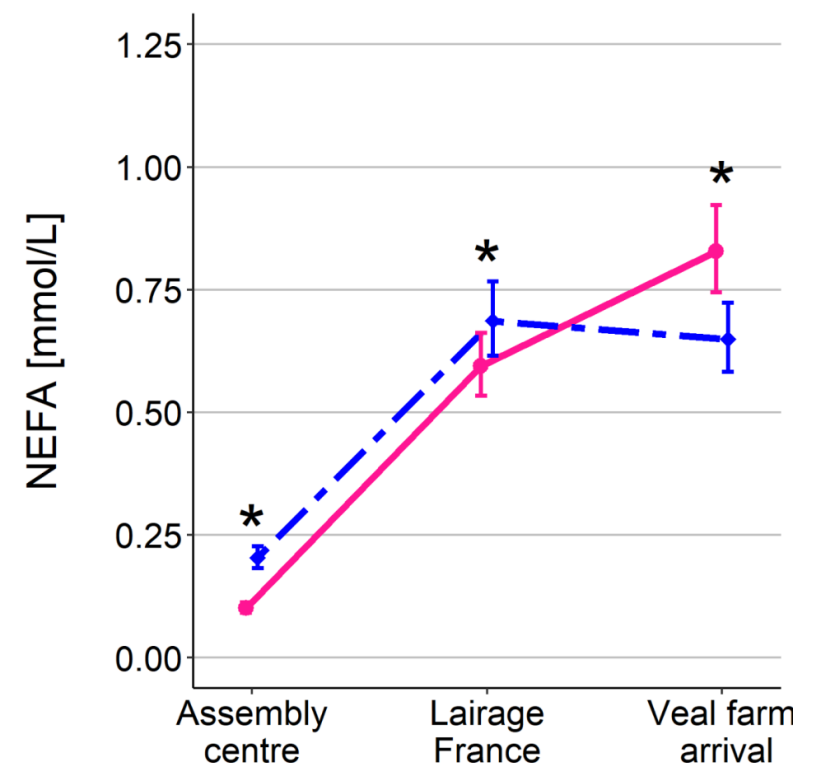
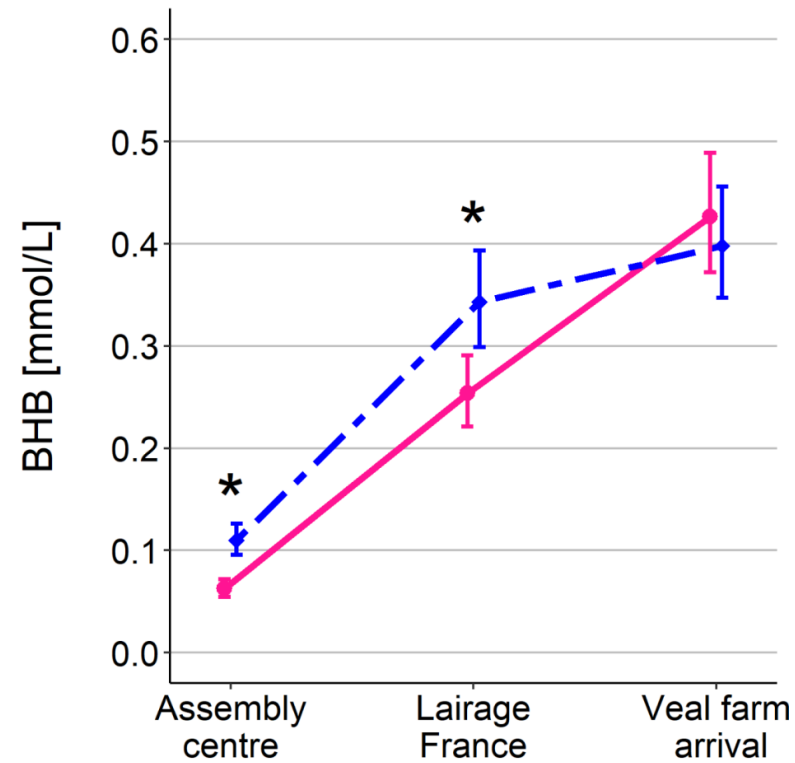
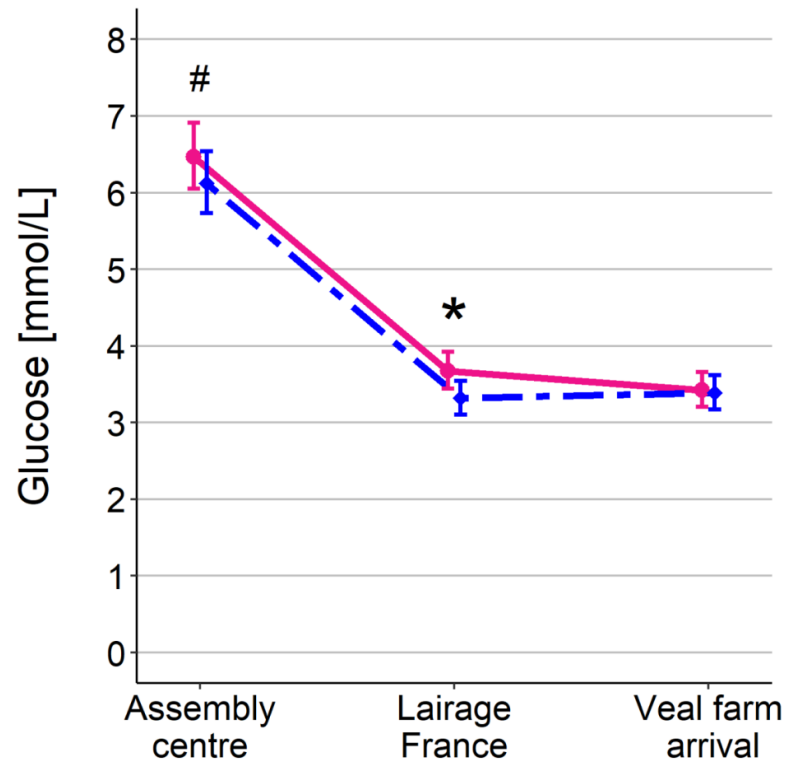


Measurements

- Body weight
- Blood variables:
 - Energy balance: Glucose, BHB, NEFA
 - Electrolytes: Na, Cl, K, Mg, Ca
 - Hydration: Urea, haematocrit, total protein
 - Stress: Cortisol, creatine kinase



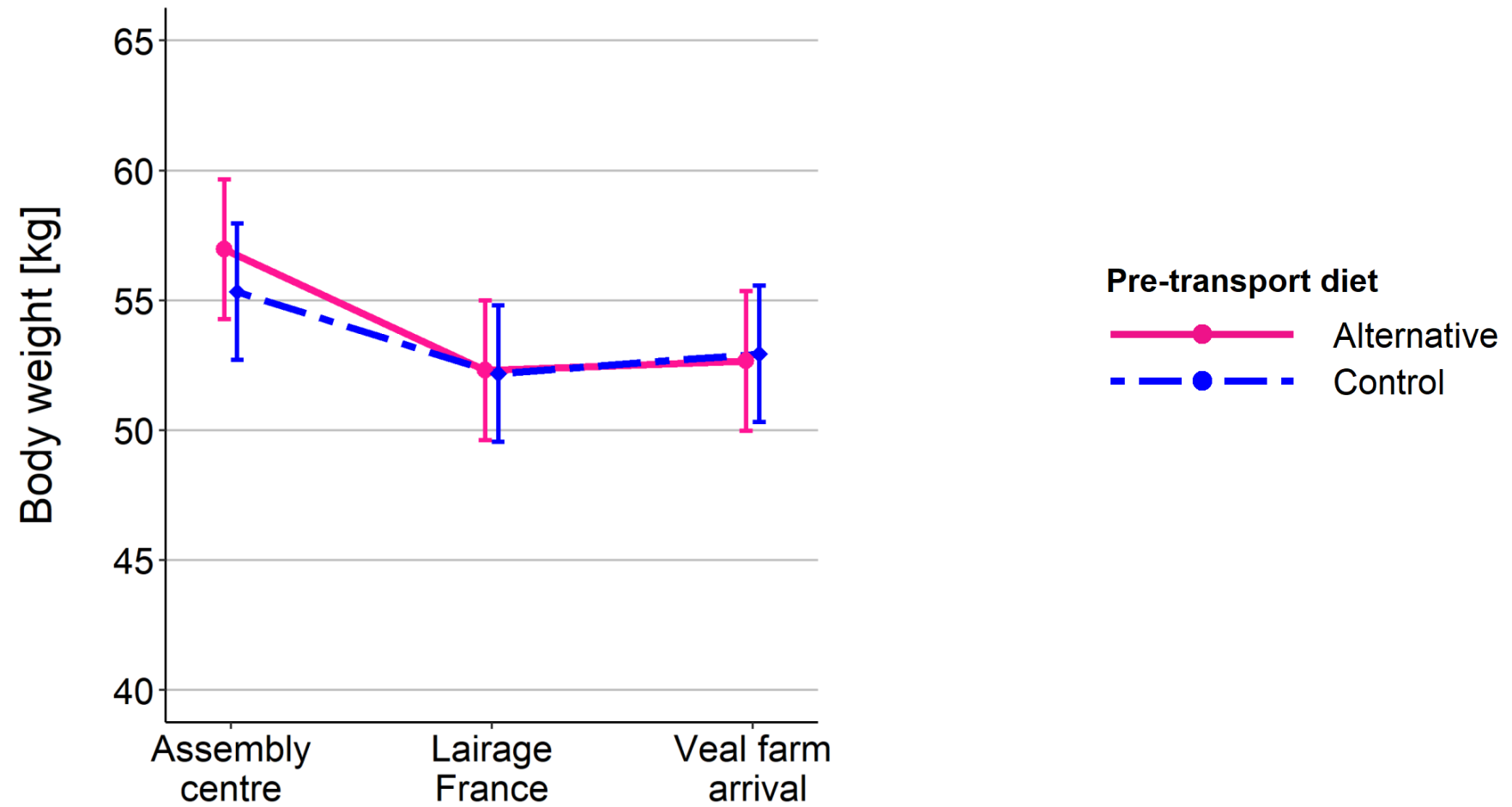
Energy balance



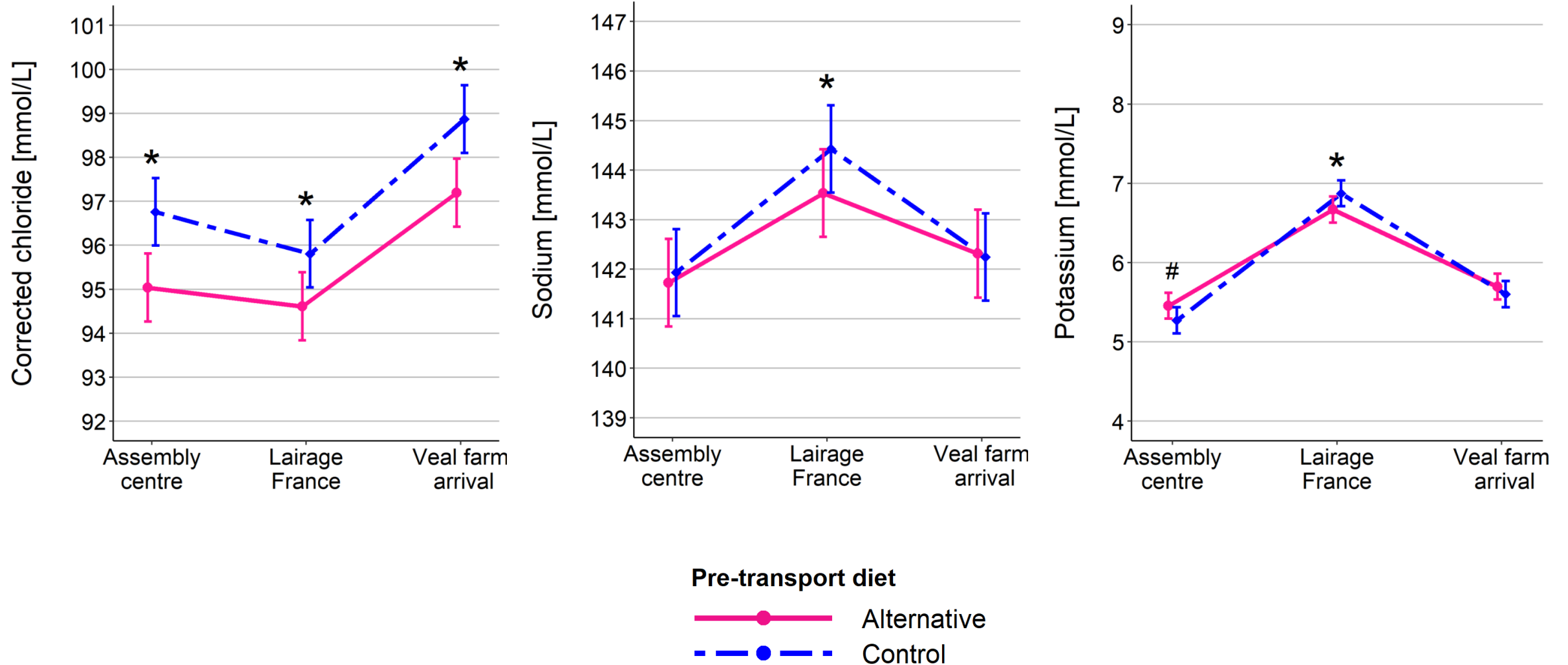
Pre-transport diet



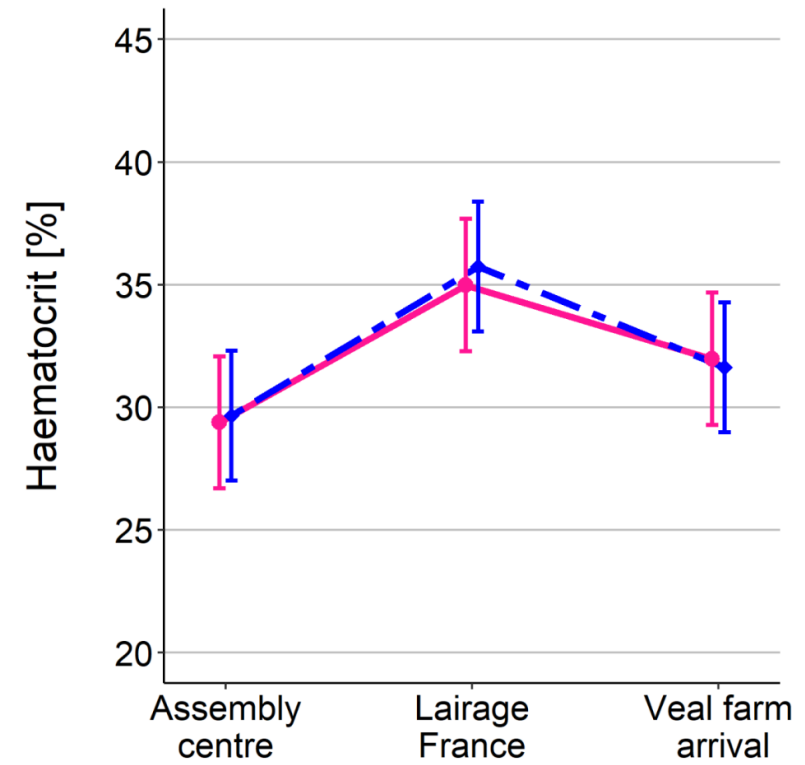
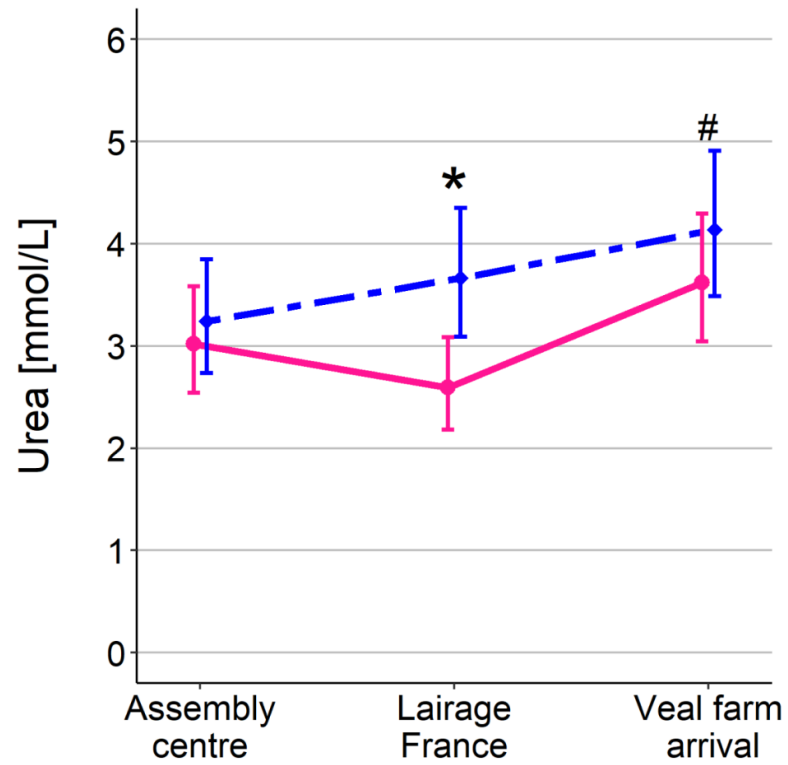
Body weight



Electrolytes/Hydration



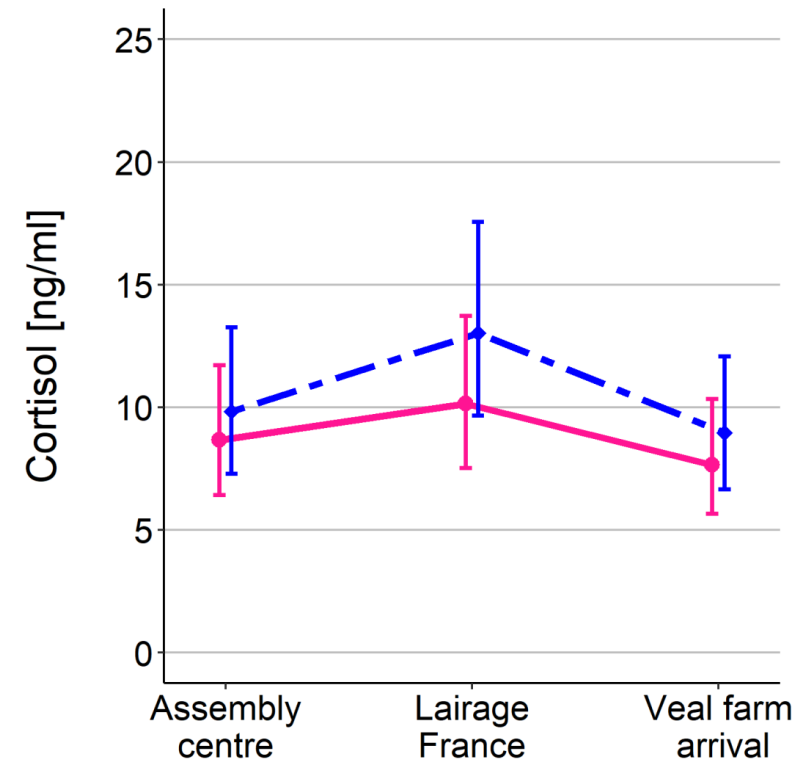
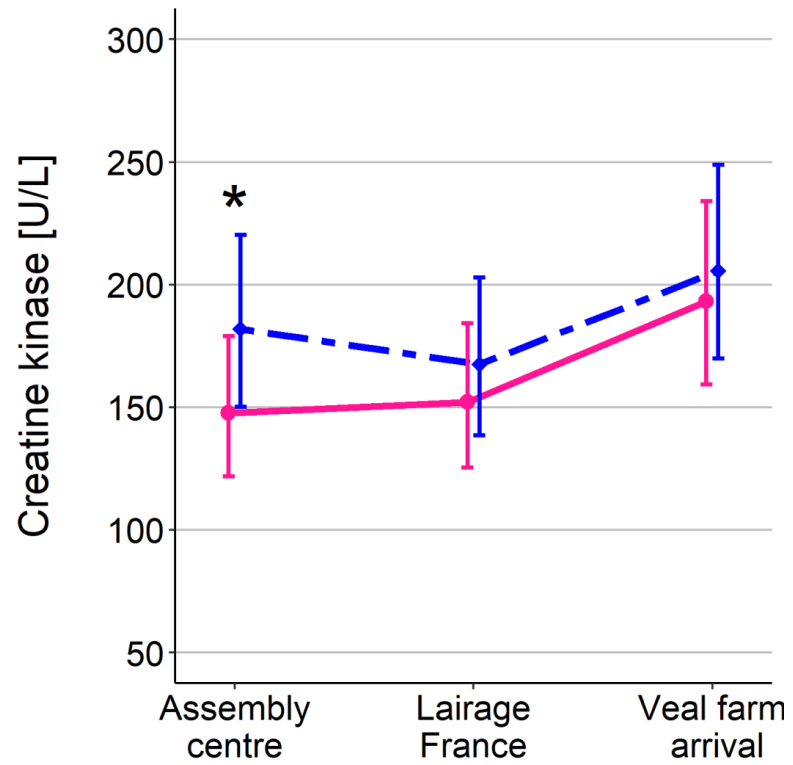
Hydration



Pre-transport diet

- Alternative
- -●- - Control

Stress



Pre-transport diet

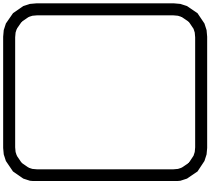
- Alternative
- -●- - Control

Conclusion



Energy balance & dehydration are positively affected by more pre-transport feed

→ but effects mostly not sustained over whole transport



Few effects on weight loss, (muscular) stress



- Immunological, health score measurements
- Recovery on destination farm

**FEED
CALVES
MORE!**



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