

A close-up photograph of a horse's head, focusing on its eye and the blinker it is wearing. The horse has light brown fur, and the blinker is dark with a blue strap. The background is a soft, out-of-focus light blue.

# Swiss Equestrian Federation

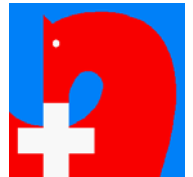
## FEI Eventing Risk Management Seminar

Marius Marro (NSO)  
Dominik Burger (NF Representative)

24 January 2021

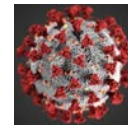
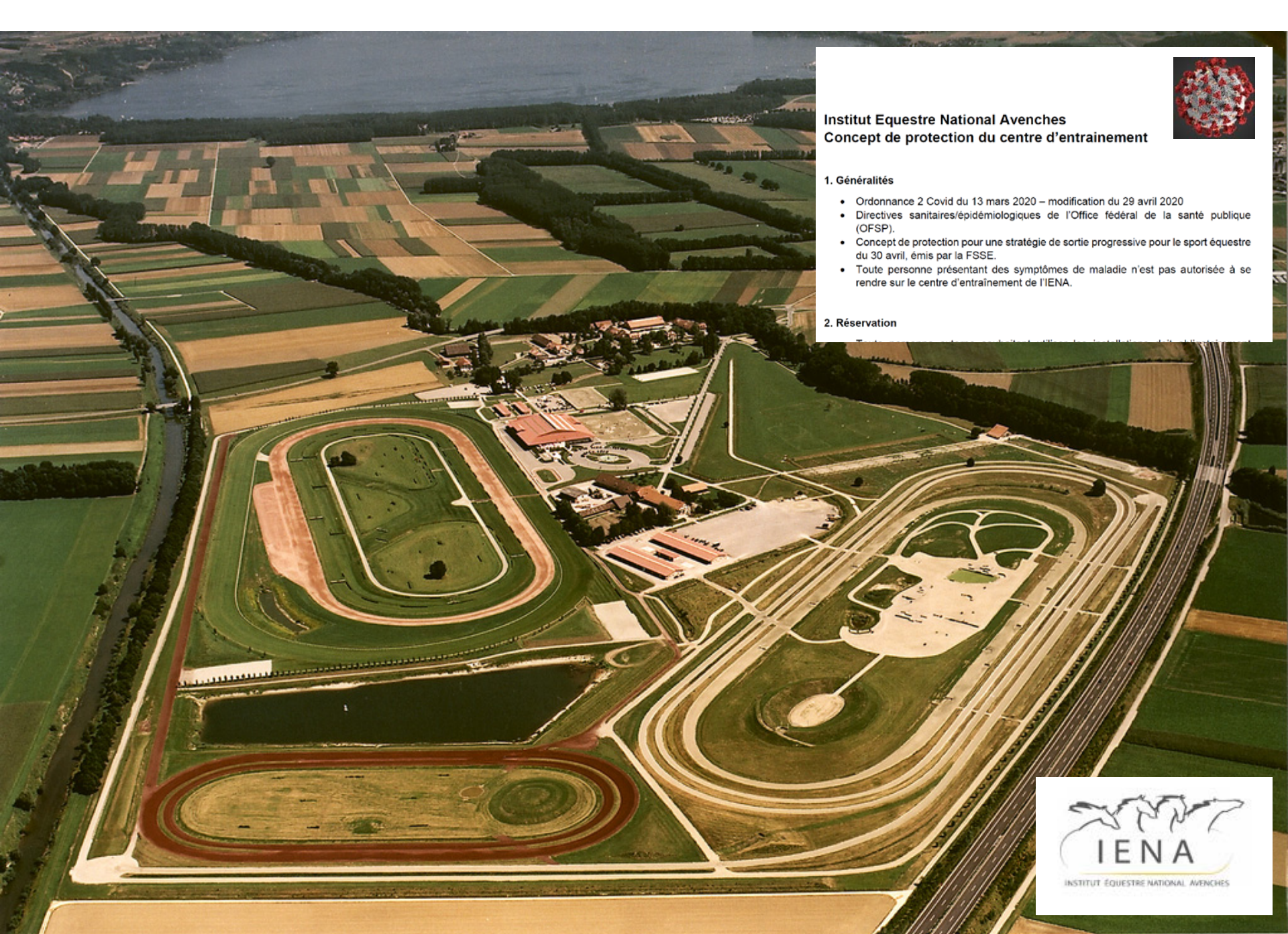


# "Last ticket for Olympics 2020" for Switzerland...









## Institut Equestre National Avenches Concept de protection du centre d'entraînement

### 1. Généralités

- Ordonnance 2 Covid du 13 mars 2020 – modification du 29 avril 2020
- Directives sanitaires/épidémiologiques de l'Office fédéral de la santé publique (OFSP).
- Concept de protection pour une stratégie de sortie progressive pour le sport équestre du 30 avril, émis par la FSSE.
- Toute personne présentant des symptômes de maladie n'est pas autorisée à se rendre sur le centre d'entraînement de l'IENA.

### 2. Réservation





# 6 Competitive Trainings 3\* et 4\* = Masterclass

10-12/07/2020

31/07-02/08/2020

21-23/08/2020

**11-13/09/2020**

(09-11/10/2020)

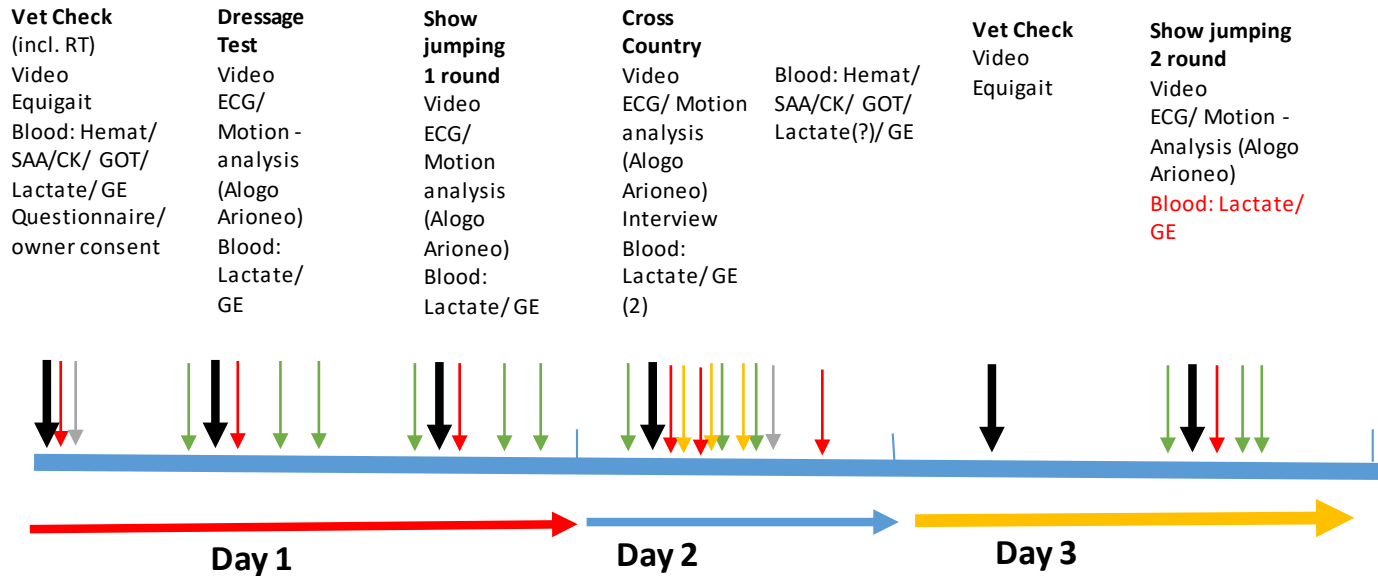
(30/10-01/11/2020)



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for the spirit of sport



# Scientific study Masterclass 2020



- Body weight
- Eye Temperature
- Blood collection
- Rectal Temperature/ Respiratory Rate



**Standardized study on 37 horses 3 times with an interval of 3 weeks and varying meteorological conditions**

# Scientific study of the Swiss Institute of Equine Medicine

## University of Berne

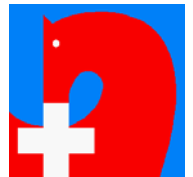


# Masterclass

Standardized program and conditions 3 times:

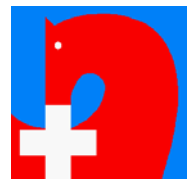
37 Elite Eventing horses (3\*/4\*):

- D1: Vet Check/ Dressage / Show jumping first round
- D2: Cross Country
- D3: Vet Check/ Show jumping second round

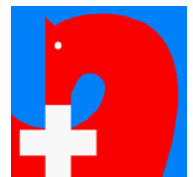
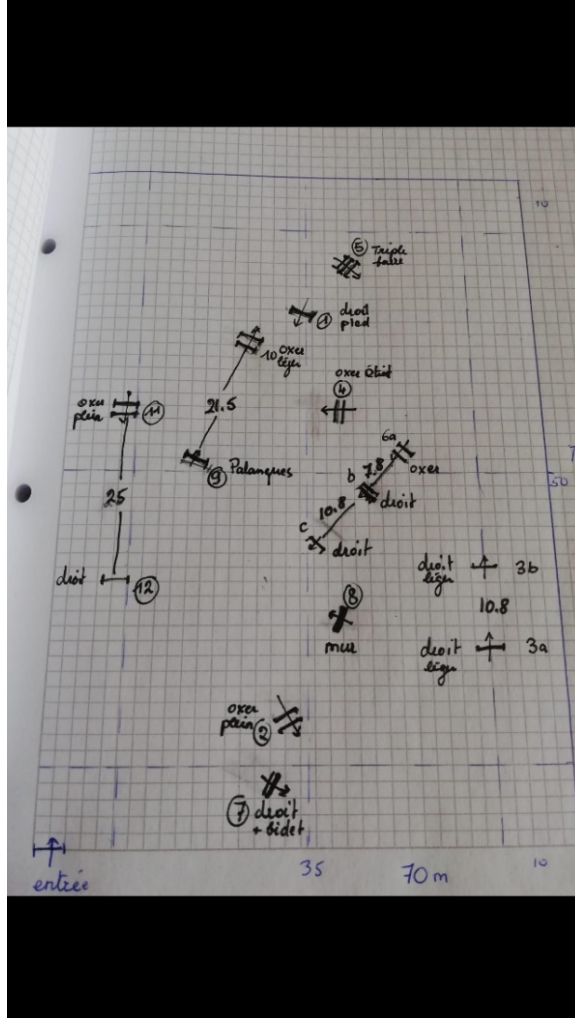




# Dressage



# Show Jumping 2x

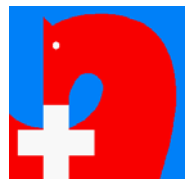






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for the spirit of sport

  
IENA  
INSTITUT ÉQUESTRE NATIONAL AVANCHES





4\*

2850 m

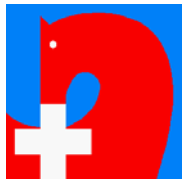
570m/min

5 min

18 numbers

26 efforts

black



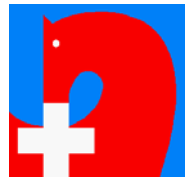


# Cross Country



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INSTITUT ÉQUESTRE NATIONAL AVANCHES

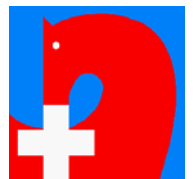
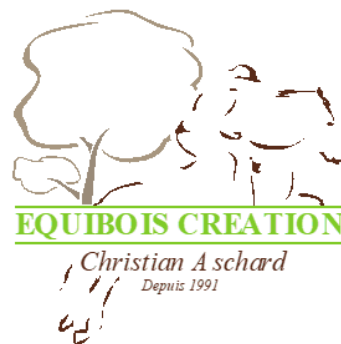




# Cross Country



→ Christian Aschard





# Cross Country



AUG  
21  
22  
23

ETTEREVENTS.CH  
SHOWJUMPING

Etterevents.ch

SCHWEIZERISCHER VERBAND FÜR KUNDESPORT  
FÉDÉRATION SUISSE DES SPORTS ÉQUESTRES

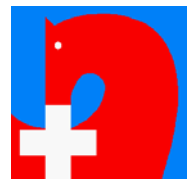
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COMPETITIVE CC TRAINING  
**IENA AVENCHES**  
LIVE-STREAM: [WWW.ETTEREVENTS.CH](http://WWW.ETTEREVENTS.CH)

IENA  
INSTITUT ÉQUESTRE NATIONAL AVENCHES

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INSTITUT ÉQUESTRE NATIONAL AVENCHES





33

Michael JUNG



fischerChipmunk FRH

20.00

1:45.8

Gefällt mir Kommentieren Teilen

Eveline Bodenmüller, Peterhans Eventing und 194 weitere Personen · 87 Kommentare

# Scientific study: Examinations

Consent of owner/ rider  
1 Questionnaire per horse

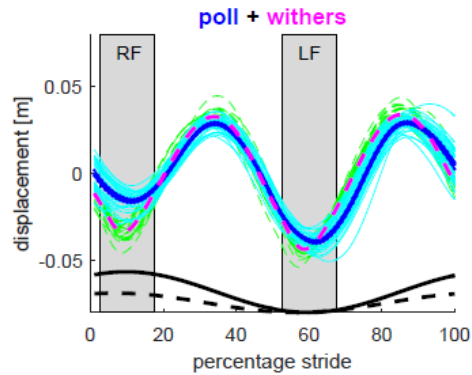
Vet Inspections with *Equigait*

- Thursday evening
- Sunday morning

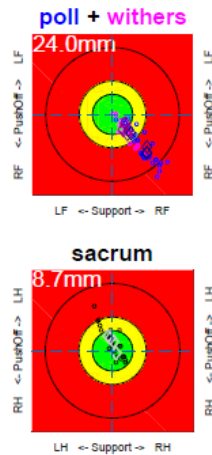
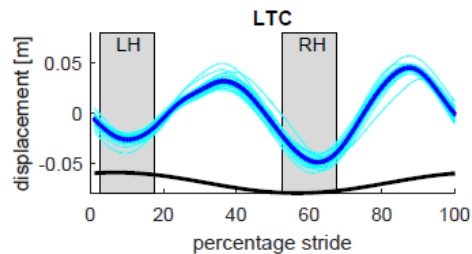
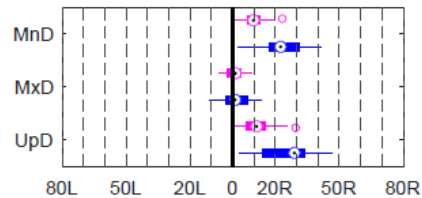




Case: 20200820 Date: 20200820T135342



	MnD	MxD	UpD	ROM
Poll	22R	1R	29R	72
	L/R%	36/ 64	0/100	
Wither	10R	1R	11R	80
	L/R%	0/100	39/ 61	7/ 93



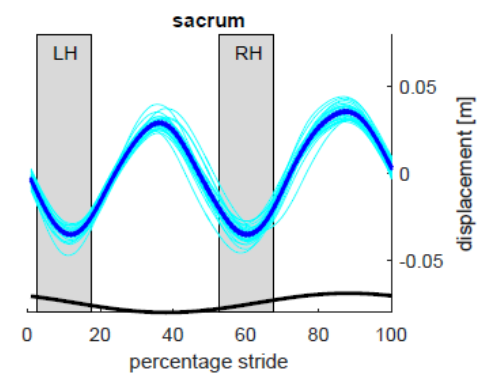
trot hard straight

NA

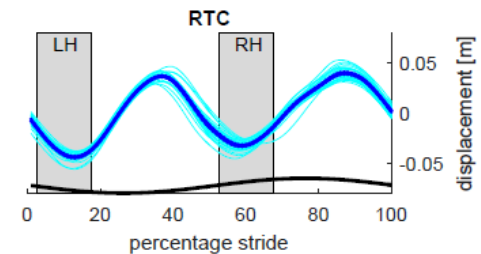
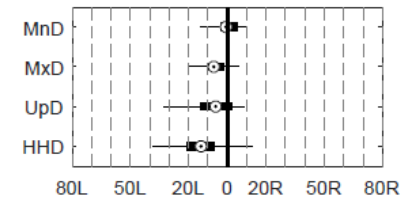
Trial Numbers: 60 61 62 63

Number of Strides: 28

Average Stride Time: 656 ms

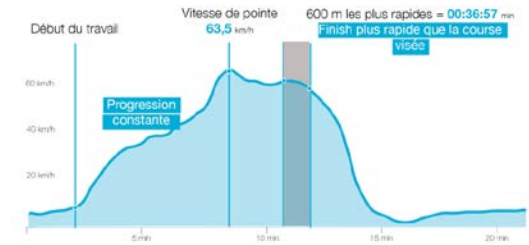


	MnD	MxD	UpD	ROM
Pelvis	1L	7L	6L	73
	L/R%	54/ 46	82/ 18	68/ 32
HHD	14L			
	L/R%	89/ 11		



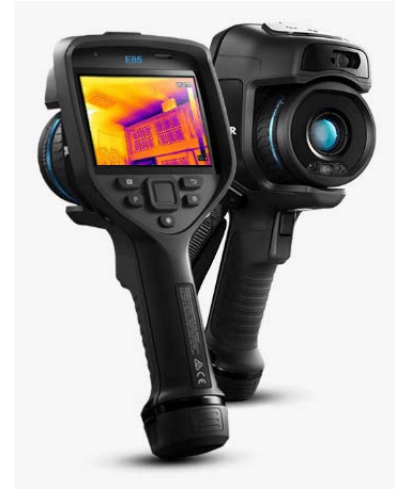
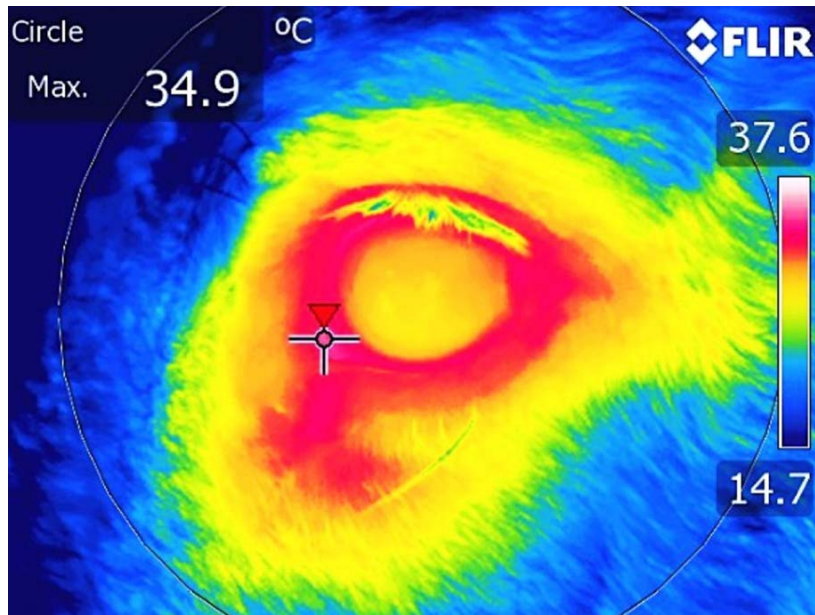
# Heart rate and Electrocardiogram

## Equimetre Vet (Arioneo)



# Thermography eyes/ hindquarters

## FLIR E 53





# Motion analysis incl. fences

## Alogo Move Pro

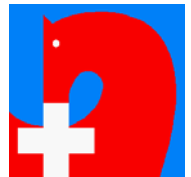


# Video incl. Ethogram



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# Subjective Evaluation

Rider  
Eventing experts





# Blood collection and rectal temperature

Lactate

Status

Biochimie incl. SAA, CPK, GOT



# Scientific and practical questions

Does **fatigue** and **thermoregulation** affect jumping results after the cross-country phase of an eventing competition? Jumping performance has so far been based on obstacle and time faults. Recently emerged technology allows the investigation of ground reaction forces and flight curves by accelerometer.

Does the **subjective impression of the rider and experts** after cross-country correlate with biomechanical and physiological findings?

Are the dressage and show jumping results associated with an increased in eye temperature (eye thermograph) just prior to entering and leaving the arena?

Is the **eye or hind-quarter temperature** better correlated to the actual core temperature than rectal temperature?

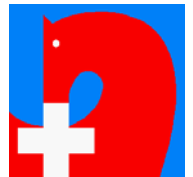
How is **thermoregulation** (rectal temperature, eye/ hind-quarter temperature), ground firmness (penetrometer), and stress (eye temperature) linked to other **physiological parameters** during repeated eventing trainings under different meteorological conditions?

Does heart rate variability and the electrocardiogram vary with the stage of competitive training in horses? Are similar cardiac rates and rhythms obtained in repeated competitive trainings? Are arrhythmias associated with **risks** during the cross-country portion of eventing?

In a further step, depending on obtained results: Is **gene expression** associated with performance results?



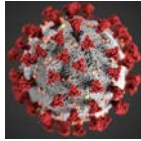
# Ongoing data analysis....



# Future

2021: ?

?



04-06/06/2021

CNC Masterclass compétitions 3\* et 4\*

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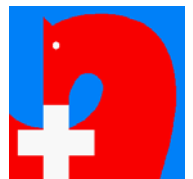
24-27/06/2021

CCI Avenches 4\*-S, 3\*-L, 3\*-S, 2\*-L

23-26/09/2021

CCI Avenches 4\*-L, CCIO 4\*-S, 3\*-L, 3\*-S, 2\*-L

without spectators...





# **FEI confirms Jumping & Dressage European Championships 2021 in Germany**

TM

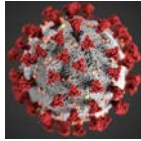
© 21 October 2020

→ Re-Opening Bid for Eventing...

???

2021: ?

?



04-06/06/2021

CNC Masterclass Competitions 3\* and 4\*

CNC Masterclass Competitions 3\* and 4\*

CNC Masterclass Competitions 3\* and 4\*

24-27/06/2021

CCI Avenches 4\*-S, 3\*-L, 3\*-S, 2\*-L

23-26/09/2021

CCI Avenches Eventing European Championships ?

without spectators...?



A close-up photograph of a horse's head, focusing on its eye and muzzle. The horse has brown fur and its eye is partially visible, looking towards the right. The background is a soft, out-of-focus light blue and white.

# Thank you !



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**ISME**

Institut suisse de médecine équine  
Schweiz. Institut für Pferdemedizin  
Istituto svizzero di medicina equina  
Swiss Institute of Equine Medicine