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Background.—Endurance sportsmen have many preconceived ideas about nutrition best practices, without real scientific support for these.

Objectives.—Considering the absence of literature and research on this subject, this study aims at identifying and at discussing the main preconceived dietary ideas and habits of these sportsmen.

Methods.—Quantitative study on 545 endurance sportsmen from various profiles (amateurs, competitors, professionals) practising mainly running, cycling, triathlon.

Results.—Seventy-seven percent of respondents are male (38 years on average). Eighty-eight percent practise their sport in competition. Fifty-nine percent have a particular dietary approach to practise their sport. This study highlighted several preconceived ideas: 62% of sportsmen limit their consumption of red meat to avoid cramps and the production of toxins; 19% limit their consumption of milk by fear of tendinopathies or digestive disorders (58.5%). Other preconceived dietary habits (energy drinks, vitamins, slow-burning sugars, hydration, alcohol) were studied and provided interesting information about endurance sportsmen's eating and drinking habits.

Conclusion.—The study highlighted the importance granted by endurance sportsmen to nutrition for the practice of their physical activity and for the improvement of their performances. It also identified several incorrect preconceived dietary ideas and bad habits from these sportsmen.

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CO53-005-e

Heart rate variability before and after strenuous exercise. Stressed or Zen?

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Keywords: Heart rate variability; Running; Stress; Sleep

Objectives.—Is there an anticipatory stress and a post exercise easing off after a strenuous exercise in a stressful situation?

Methods.—Heart rate variability, a marker of sympatho-vagal balance, was recorded twice, the nights before and after an 8 km run in full combat jacket with a 11 kg load among 61 military subjects. Spectral and temporal analysis were performed and compared with subjective anxiety and sleep scales.

Results.—Before the run, two profiles were identified: profile 1 was associated with subjects who mainly exhibited vagal activity during the first part of sleeping. Profile 2 was associated with subjects who mainly exhibited sympathetic activity. After the run, these two profiles were observed, without changing from profile 2 to profile 1 from one night to the next. There was no correlation with perceived anxiety.

Discussion.—The absence of vagal bounce after strenuous exercise among subjects with sympathetic activity before the run suggests that intrinsic factors may be present. Further studies are required to determine whether this profile is protective or not.

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Relation between the intensity of the answer to the tests of in vitro contracture test (IVCT) and 31P magnetic resonance spectroscopy realized in 2008–2010 and the clinical, biological data in the military population having presented a heat stroke

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Keywords: Coup de chaleur d'exercice; Hyperthermie maligne peranesthésique; Test de contracture in vitro (IVCT); Spectrométrie de résonance magnétique (SRM)

Methods.—Retrospective study led to 120 French soldiers having presented a heat stroke and explored between 2008 and 2010 by a muscular biopsy with test in vitro contracture test (IVCT) and 31P magnetic resonance spectroscopy (MRS). Clinical and biological data concerning the heat stroke were raised.

Results.—Eighty-nine percent of the patients were men, 26-year-old on average, satisfactory sports level. The average temperature was 39.9 °C, 85% presented neurological signs, 22.5% a renal insufficiency and 10% a hepatic insufficiency; 13.5% were hospitalized in intensive care units. In the tests IVCT, 20% had a positive test, 59.2% a negative test and 20.9% an ambiguous test.

Discussion.—In 2013 heat stroke is always a problem in the evaluation of the risk of recurrence. In the hypothesis of a muscular pathology, the victims of a heat stroke benefited of an exploration by tests IVCT and MRS. Our data showed the absence of significant link between the results of the tests and the clinical presentation, gravity or the risk of recurrence. This exploration cannot answer about a possible sensibility in the MH and foresees not at all the risk of recurrence.

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Study of tolerance and fatigue during the basic training program in the French army among young recruits. Study of the impact on strength and endurance

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Keywords: Basic training; French army; Overtraining syndrome; Trauma injuries; Sport; Fat mass

Background.—Basic training (BT) is a high risk period for the recruits in terms of trauma. Is this BT well tolerated in the French Army?

Methods.—It is a prospective cohort study. It took place in Gap at the “Centre de Formation Initiale Militaire”, from September 2012 until April 2013. During this period, all the recruits of this military training center were included. The incidence of overtraining syndrome (OTS) was evaluated by the French Sport Medicine Society questionnaire. This questionnaire was performed three times during the BT period. The incidence of traumas was reported and analysed during medical consultations. Anthropometric measures were made.

Results.—Among 155 subjects included, 5 (3%) had an overtraining syndrome; with 24 traumas occurred, so 15% of the subjects were injured. Subjects with an increase of the OTS score had a higher risk of trauma: 35% vs. 10% ($P=0.01$). Subjects with a trauma had a higher initial fat mass index: 14.6% vs. 12.8% ($P<0.01$).

Discussion.—BT in the CFIM of gap is well tolerated, compared to others studies. Monitoring of fat mass index and OTS could be interesting in terms of trauma prevention among this population.

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