

Sport applications

Salivary steroid kits for Athlete overtraining assessment

Salivary steroid levels were found to be useful for monitoring the hormone response to physical exercise.

During physical exercise the free salivary Cortisol concentration increases with the intensity of the exercise followed by an increase of the free Testosterone.

The balance between catabolic (Cortisol) and anabolic hormones (Testosterone, DHEA-S) may have important implications of physical strain during sports training and should be applied as a training control tool under hormonal aspects.

The profile of the tolerance to the sporting activity allows the evaluation of the impact of the physical activity, to professional or however competitive level, on the function of adrenal gland cortex (the secretion of cortisol) committed to manage the adaptation of the organism to every type of stress.

An excessive physical activity could stress the organism, determining unbalanced hormonal orders that can jeopardize the state of optimal health and therefore the sporting output.

There is the possibility to determine if the program of preset physical exercise evokes an abnormal reaction of adaptation of the organism.

To such purpose a measurement of the salivary levels of cortisol is used in relationship to the session of training. The levels of cortisol have some physiological variations in such circle, and their dosing allows to determine if physical activity is correctly planned or if it is cause health damages.

References:

- Cortisol and Affective Responses to Exercise. Rudolph, D.L. et E. McAuley. Journal of Sports Sciences 16 : 121 - 128, 1998.
- Current markers for the diagnosis of overtraining syndrome in the practice of training. Urhausen, A., Kindermann, W., Deutsche Zeitschrift für Sportmedizin, 51: 226 - 233, 2000.
- Hormonal responses to excessive training: Influence of cross training. Flynn, M.,G.. et al. Int.J.Sports Med. 18: 191-196, 1997.



Saliva Kits

- Non invasive tests
- The most complete range of analytes
- One step procedure
- Calibration curve and Specific Reference Controls (three levels)
- Standardized sample collection

Recommended for:

- *Stress assessment*
- *Occupational medicine*
- *Sports medicine*
- *Veterinary applications*

Immunoenzymatic determinations (ELISA) in saliva.

Code	Description
DKO020	Cortisol saliva
DKO021	Testosterone saliva
DKO022	Estradiol saliva
DKO023	17 OH-Progesterone saliva
DKO024	DHEA-S saliva
DKO025	Progesterone saliva
DKO026	Estriol saliva
DKO027	Androstenedione saliva
DKO063	Saliva collection devices
DKO067	Saliva controls (3 levels)
DKO075	Amylase
DKO078	IgA saliva

Please visit our Web site at the address:

www.diametra.com

to find information about our kits for plasmatic tests

DiaMetra srl

Headquarter

20090 SEGRATE - Milano - Italia
Via Garibaldi, 18
tel. +39.02.21.39.184 - fax +39.02.21.33.354
info@diametra.com - www.diametra.com

Manufacturing

06034 FOLIGNO - Perugia - Italia
Via Giustozzi, 35 - Z.I. Paciana
tel. +39.0742.24.851- fax +39.0742.31.61.97
e mail: capocciuti@diametra.com