STRESS PANEL.

Burnout.

Recent stress research indicates that more and more people are concerned about work-related stress; this makes occupational stress as important for companies as workplace accidents. The World Health Organization (WHO) has described stress as “one of the major threats of the 21st century”. For this reason more and more institutes and physicians are involved in identifying and measuring biological parameters which can reveal individuals’ psychobiological and physiological status.

Please, visit our homepage www.tecan.com/ibl for more details of assays of other biological fluids besides saliva, or contact us directly for more information.

Stress research.

Stress research in clinical psychology very often relies on questionnaires, but psychologists are always looking for biological parameters; free salivary cortisol is a very well established, non-invasive marker for hypothalamus pituitary adrenal (HPA) axis activity (internal studies; Wittchen, Schönfeld et al, 2012).

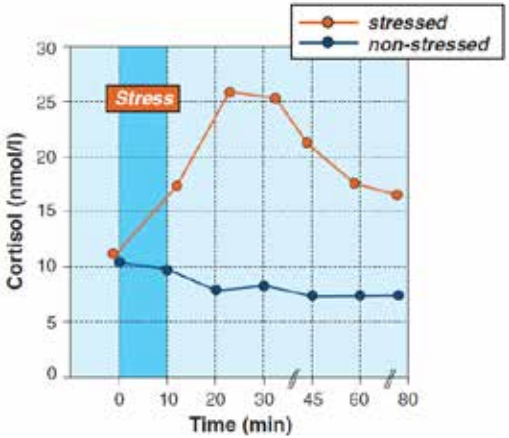

Figure 5: Cortisol responses to moderate psychosocial stress.

Products	
RE52611	Cortisol Saliva ELISA
30221150/ 30221151	Cortisol Saliva Luminescence/ Bulk
RE52651	DHEA Saliva ELISA

Furthermore, hair cortisol analysis provides a valuable and sensitive retrospective measure of cumulative cortisol secretion over prolonged periods of time (Stalder *et al.*, 2012).

The parameter alpha amylase exhibits relationships with chronic stress, post-traumatic stress disorder, behavior, cognitive functions, and health.

Sleep disorders.

Occupational medicine covers sleep disorders, occurring mostly in shift workers and leading to psychological and physical stress.In this kind of disorder it is helpful to evaluate individual circadian rhythms, combining measurements of melatonin and cortisol concentration: both hormones are produced according to a circadian rhythm, with contrary circadian patterns.

Changes in the levels of melatonin and alternation in the pattern of secretion have been reported to coincide with: sleep quality, insomnia, daytime sleepiness or jet lag. Normal cortisol concentration in human saliva during the day is highly dynamic. Cortisol typically peaks in the early morning: the timing of this cortisol peak does not depend on clock time nor is it influenced by daylight: it is set by the individual's time of waking.

Both hormones are regarded as stress markers. Recent studies have shown that melatonin can influence cortisol levels (Rahman, et al., 2019.). These results are useful in the research of sleep disorders.

Anti-aging medicine.

DHEA levels decline significantly with age, reaching their lowest in individuals over 80. DHEA influences various body systems and has anti-aging and immune-enhancing effects. Studies, including Heaney et al. (Psychoneuroendocrinology 2012), show that decreased DHEA and a higher Cortisol/DHEA ratio are linked to cognitive and immune impairments, reduced daily functioning, and increased infection risk in older adults under chronic stress.

Products	
RE80111	alpha Amylase Saliva Assay
DM59171	IgA Saliva ELISA
RE54041	Melatonin Saliva ELISA

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