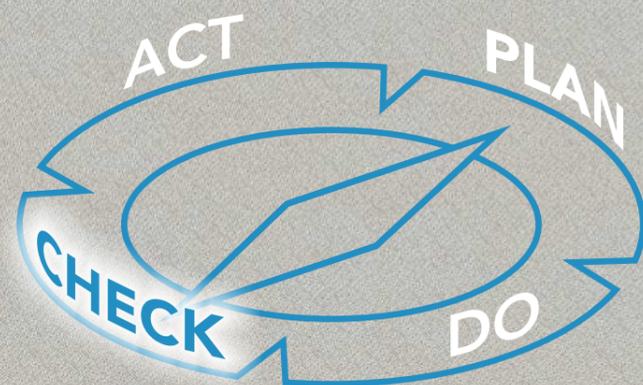


HEALTH MANAGEMENT

Occupational health management is a delicate topic providing not only information on the fitness to work but, more importantly the ability to increase efficiency of a workforce. If your approach is too general, you are at risk of not reaching an individuals potential and your investment in them is likely to be lost. A day at the spa may be a nice benefit for the employee, but does that improve individual productivity? If your approach is overzealous, you might find yourself spending more for consultants and personal coaching than your investment can return. A common pitfall is to forget about an essential component of a management process; closing the loop by measuring and reporting the outcome.

cardiscope™ ANALYTICS is the tool that closes this gap. Based on the assessment of autonomic function, it provides a variety of measured parameters that can be integrated into a health plan. By trending an individual's outcomes from regular checks the effectiveness of the health management process can be assessed.

Team level perspectives can identify individuals for immediate or prioritised action. This way, targeted health management is an effective tool and costs are contained to the prescribed budget.



AUTONOMIC FUNCTIONS



Every moment of the day innumerable bio-chemical processes help in a complex interplay to keep us alive. Catalysts, inhibitors, hormones and other substances are continuously generated, modified and dismantled. However, like in an industrial chemical plant these vital processes can only take place only under certain conditions. Our bio-chemical processes for these conditions to be right include blood pressure, temperature, acid-base balance, CO₂ and O₂ partial pressure. The homeostasis describes a situation when the optimum ratio of these factors is achieved. The Autonomic Nervous System (ANS) ensures, inter alia, that the homeostasis is maintained at all times. As the name suggests, the ANS acts autonomously, that is, that we cannot consciously control its function.

Since all processes in our body are finely tuned any derailment may cause a chain reaction and then manifest in a variety of symptoms and diseases. The ANS responds early to disturbances, even before we may perceive a change. By analysing the heart rate variability (HRV) we can now estimate the operating point of the ANS and identify negative influences on the body. HRV can be conveniently determined using a surface ECG and is therefore very well suited to detect early changes in the ANS behaviour, or, during therapy to monitor the response to treatment.



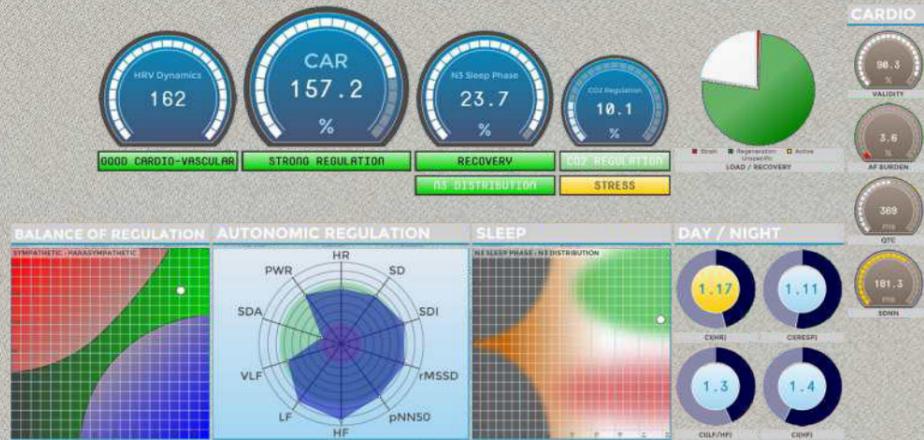
<https://cardiscope.com>

cardiscope™

ANALYTICS



DASHBOARD & DETAILS

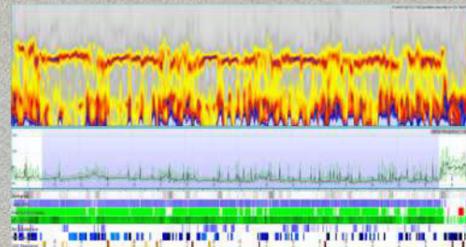


A simple visual interface allows you to extract the most important key findings of a recording, like a cardiac risk assessment, the appraisal of the heart fitness, the level of resilience and the balance between sympathetic and para-sympathetic regulations. Particular attention is paid to the influence and quality of sleep. The processes triggered by the autonomic system during the night/sleep reveal the exposure of the individual to conditions that cannot be consciously influenced.

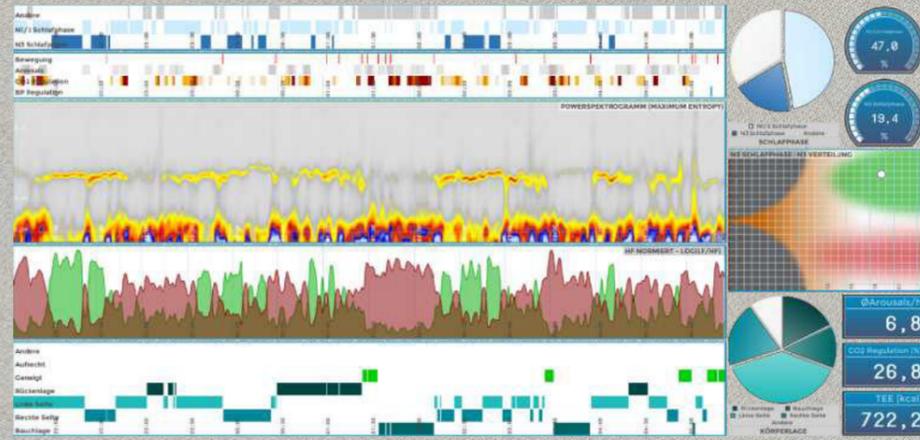
Key HRV parameters are supported by a large database of more than ten thousand analysed 24 hour recordings of ECG and HRV.

Standard HRV parameters in conjunction with newly developed indices, customisable plots/trends and tables are available within the software for greater depth of analysis if required.

For the purpose of integrating the system in other software packages, all data can be exported into a variety of formats.



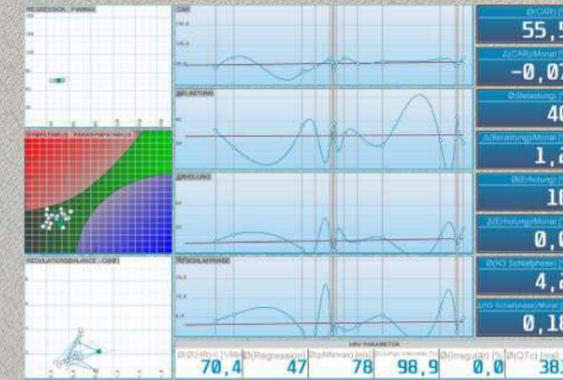
SLEEP & RESPIRATION



Sleep is the foundation for a healthy life style. Hence, the assessment of sleep became a central feature of the cardiscope™ ANALYTICS software. Derived from the EKG and an optional motion and posture sensor we can gain details about sleep architecture, depth of sleep, occurrence of apnoea and arousals, and similar information, which provide very specific hints for individualized measures to improve ones overall sleep quality.

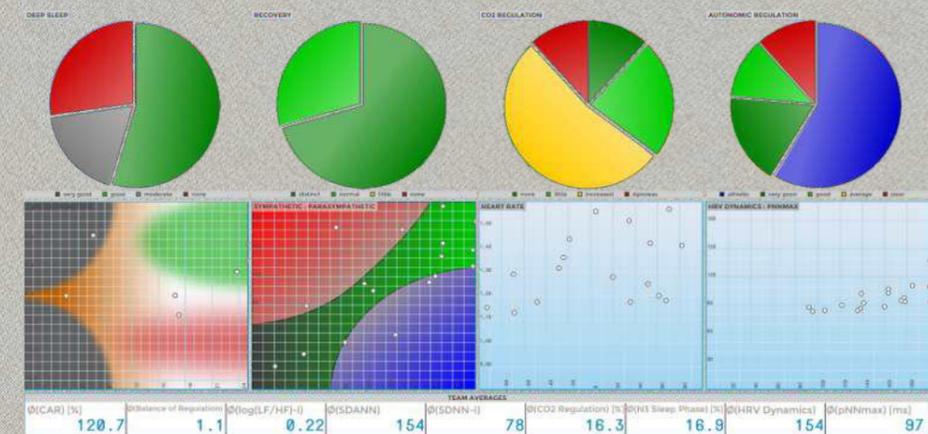


INDIVIDUALS & TEAMS

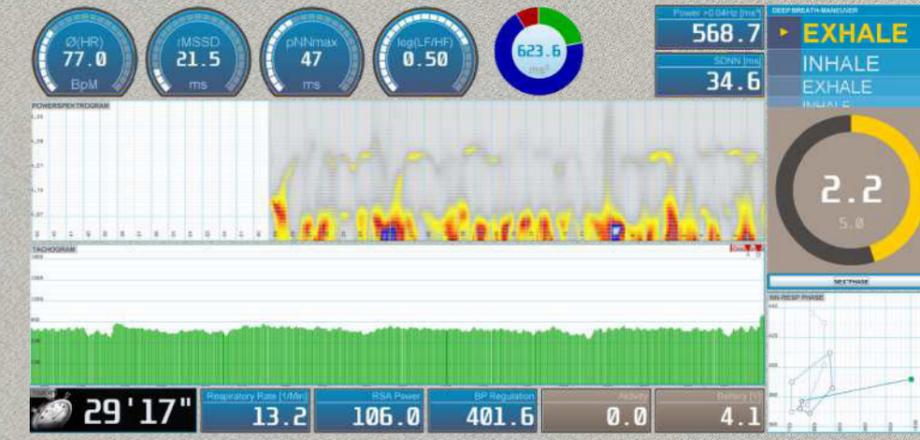


Modern diseases are not cured over night but often demand a change of lifestyle and therapy over months to recover. To track the changes and assess the effectiveness of a treatment, the key parameters of one person are presented automatically.

With cardiscope™ ANALYTICS teams can be monitored as a group and reported- anonymously for the supervisor- as performance charts. Particularly in occupational health, this feature allows a very simple way to identify the problems within a management group, locate the cases requiring instant actions, and track the improvements of the health management plan.



REAL-TIME ASSESSMENT



cardiscope™ ANALYTICS supports real-time acquisition and analysis of HRV data with supported recorders equipped with a BlueTooth™ interface. Popular manoeuvres e.g. Valsalva, Orthostasis or a deep-breathing cycle are available and custom specific manoeuvres can be added to the list easily.

Although a short, real-time recording does not provide the same diagnostic level as a 24 hour recording, it can be used to assess the performance of different autonomic systems in controlled conditions that can be reported against validated normal values. Certain therapies and training allow a fine-tuning of the treatment, as effects can be monitored instantly.

