REVOLUTION IN SPORTS MEDICINE

INTEGRAL MONITORING SYSTEM

SPEEDDIAGNOSTIC

New universal technology for diagnosing functional state of the body in adults and children at rest.

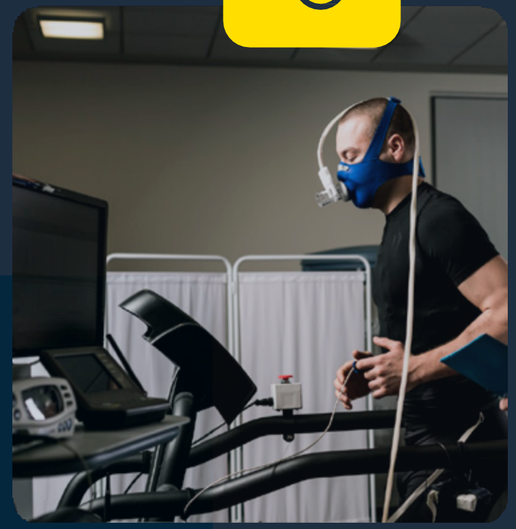
- INNOVATION
- FLEXIBILITY
- EFFICIENCY
- UNIQUENESS

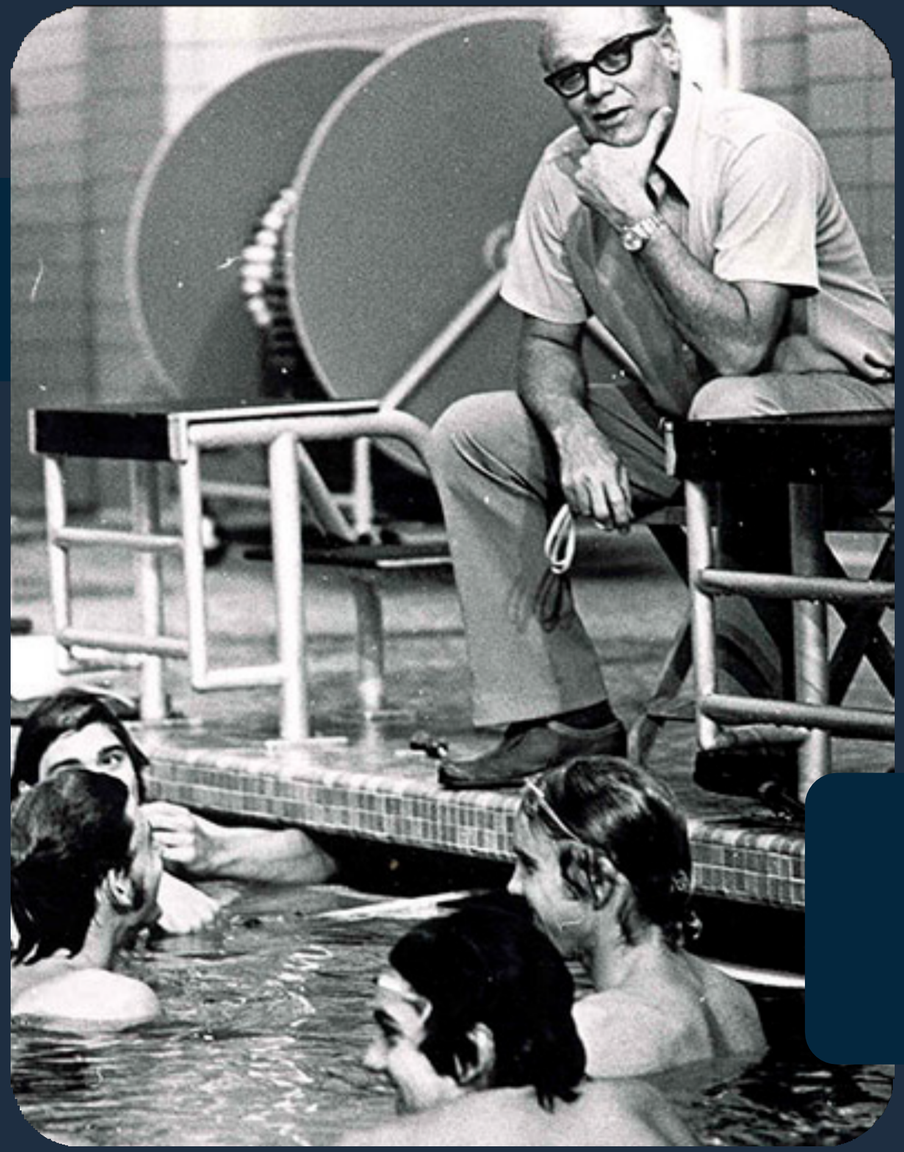
FUNCTIONAL STATE DIAGNOSTICS

Based primarily on the assessment of the functional state of the body (FSO).

Today, sports physicians and physiotherapists have quite a few possibilities of functional diagnostics: they measure the parameters of cardiopulmonary system against the background of maximum or submaximal physical exertion.

This is why this diagnostic cannot be used before competitions and is contraindicated in case of injuries or illnesses, as well as in children.





SPEEDDIAGNOSTIC MAKES IT POSSIBLE TO CARRY OUT DIAGNOSTICS AT REST

This diagnostics can be applied on any training or competitions day.

The famous American coach and physiologist James Councilman (1920-2004), who trained 22 Olympic champions and world record holders in swimming, said:

The FSO diagnostics is a big problem in sport. The lack of daily monitoring of the athlete's FSO can cause serious negative consequences: the development of chronic stress; the occurrence of overwork and overtraining; the reduction of performance and results; the occurrence of diseases and injuries.

AN ILLUSTRATIVE SITUATION OCCURRED AT EURO 2020 CHAMPIONSHIP

The Danish national team athlete Christian Eriksen lost consciousness right during the match - he was miraculously saved thanks to professional and fast medical help.

This situation could be avoided, if Eriksen had been tested by SpeedDiagnostic before the game, which easily diagnoses overtraining syndrome and the associated hypertrophic cardiomyopathy that caused acute heart failure in the football player.

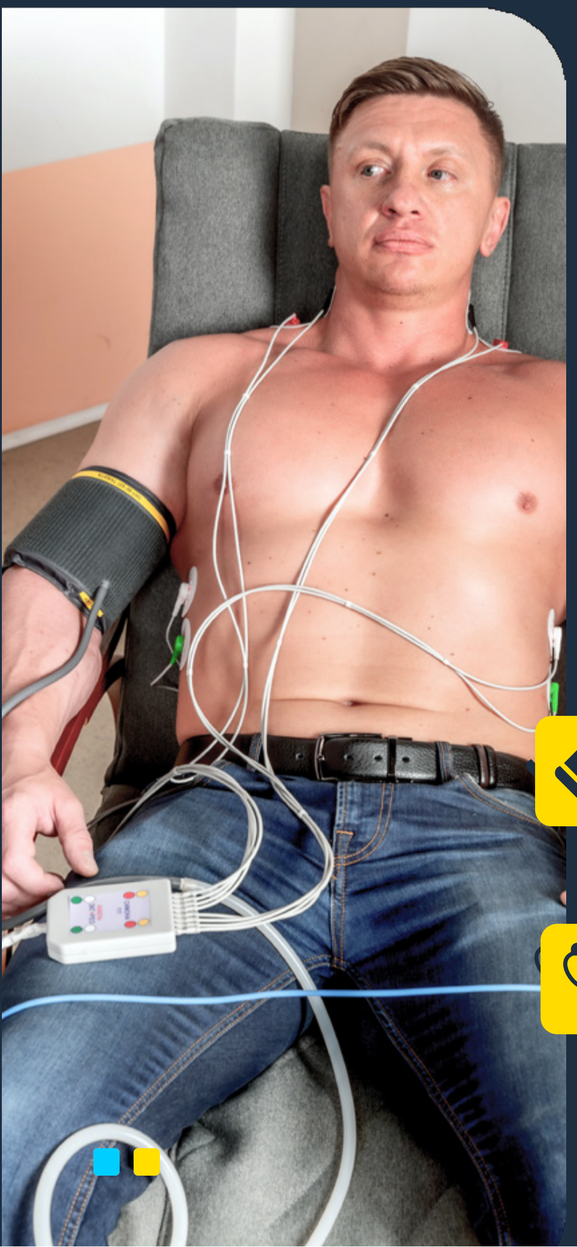
SPEED DIAGNOSTIC PROVIDES FSO DIAGNOSTICS AT REST

The system evaluates the human body as a single biological subject.

This diagnostics technique lowers the age limit from 15 to 3 years, which is not possible when using load tests.

SpeedDiagnostic determines a children's potential in professional sports. Parents and children have a unique opportunity to allocate their resources in the "right" direction.

This technology allows sports teams and clubs to sign contracts with very promising athletes.



THE SYSTEM RAISES SPORTS MEDICINE TO A QUALITATIVELY NEW LEVEL

The technology helps doctors not only to measure the functional state of the body, but also focus on its correction, improving athletic performance.

The interaction between the team doctor, coach and athlete becomes closer, more open, clear, direct and, most importantly, trustworthy.

Ehe system's applications in sports medicine:

- Detecting children and adults with athletic potential
- Selection for national teams (including reserve)
- Keeping athletes and team members healthy
- Evaluating the efficacy of medical treatment
- Diagnostic of the level of physical shape in sport, stress resistance
- Evaluation of the training loads(sufficiency, redundancy)
- Early and fast overtraining diagnostics
- Optimizing training and competition plans

SPEEDDIAGNOSTIC DOES NOT HAVE ANY DISADVANTAGES

This technology is used by the sports elite - it is easy to use and meets the following criteria:

NEW TECHNOLOGY SPEEDDIAGNOSTIC

OPPORTUNITIES:

- \+ Objective: does not depend on the athlete's motivation
- \+ Universal: for all types of sports
- \+ No-load testing: no contraindications and no age restrictions (children, adults, old people)
- \+ Prompt: takes a short period of time (3 minutes)
- \+ Frequent: carried out with any frequency
- \+ Mobile: anywhere and anytime

FUNCTIONAL:

- \+ Integral (systemic, multifunctional) - shows adaptive capabilities of the body (functional reserves)
- \+ Reveals changes in FSO (reflects dynamics)
- \+ Detects disorders of various physiological functions
- \+ Gives recommendations for FSO improvement
- \+ Evaluates efficiency of recovery process
- \+ It will not interfere with the athlete's training plan

TRADITIONAL DIAGNOSTICS

OPPORTUNITIES:

- − Nonobjective: highly dependent on the athlete's motivation
- − Highly specific: for each sport, there are specific load tests
- − Exercise testing: not performed after or during sickness/injury and has age restrictions (15-40 years)
- − Prolonged: takes a long time (2-3 hours)
- − Occasional: at the beginning and end of the season and during competition pauses
- − Static: at major medical centers

FUNCTIONAL:

- − No clear conclusion about the level of fitness Rough assessment of FSO (only 3 types of conclusions)
- − Does not identify the causes of impairment of FSO
- − Does not give the granularity of violations
- − Does not give recommendations for improving FSO
- − Does not assess the effectiveness of recovery process
- − Interferes with the regular plan of preparation for the competition

SPORTS TEAMS AND FEDERATIONS CAN NOW IMPLEMENT THE TECHNOLOGY IN THEIR WORK

Such organizations have a very positive future and new sports achievements!

VICTORY - the result from the introduction of advanced technologies allowing to:

- Build a maximally strong team on the day of competition.
- Find at an early age and timely select talents for professional sports
- Timely diagnose overtraining
- Individualize the training program based on objective FSO data

DEFEAT - the result of falling behind competitors, namely:

- Relying on past experiences and accomplishments on the day of competition
- Relying on past results of load tests, carried out only 2 times a year
- Late Diagnosis over overtraining
- Build the same training process for all team members, regardless of the level of physical shape

PURPOSE OF THE SYSTEM

Measuring physiological parameters of central and peripheral hemodynamics, transport and consumption of oxygen, respiratory function , body temperature, functional activity of the brain, activity of the autonomic nervous system and metabolism.

This is the only device in the world that provides simultaneous diagnostics of all 3 vital systems; cardiovascular, respiratory and nervous systems.

The function of these three systems determines the level of health, performance, physical shape and life expectancy.

THE MAIN ELEMENTS OF SPEEDDIAGNOSTIC SYSTEM

Computer and electronic measuring unit with 9 measuring channels (monitoring lines).

1. Rheocardiograph
2. Electrocardiograph
3. Pulsoximeter
4. Non-invasive blood pressure monitor
5. Body temperature monitor (2 channels)
6. Electroencephalograph
7. Gas module (CO2 + O2)
8. Breathing Mechanics Module
9. Metabolimeter

The device is manufactured in 2 versions:

1. Stationary - all components are placed on a trolley, 90 kg weight
2. Mobile - without trolley with laptop, 8 kg weight

Integral monitoring system SpeedDiagnostic

DIAGNOSTICS IS BASED ON 127 INDICATORS

Only a specially trained physician can analyze them. The coach and the athlete need 4 integral indicators to assess the level of **physical shape** : CR, AR, STI and PFI

These values are very unstable in athletes. After training or competition, when they lose physical shape for any reason (illness, injury, poor nutrition or sleep, etc.) they decrease, approaching to the normal human level, and may even fall below the normal level.

When the athletes regain their physical shape, the level of indicators returns to the usual high level.

The faster the recovery of indicators is and the higher they are, the higher the level of physical shape.

CR - cardiac reserve

Norm 5 +/- 1

Characterizes the heart reserves, it correlates with physical durability. The higher the CR and durability is, the higher the ability to perform a large amount of work.

Sick people have CR <4.

Physically healthy and trained people have CR > 6.

The elite athletes have CR> 8 and sometimes it can reach 11.

AR - adaptive reserve

Norm 500 +/- 100

Characterizes the level of the body's reserves for performing physical and mental work, resistance to infectious diseases and the ability to endure the most serious surgery.

The elite athletes have AR> 1000 and it can reach 1 500.

STI - stress tolerance index

Norm 10 +/- 2

It characterizes the body's ability to tolerate physical and mental stress without harm to health.

In case of high stress resistance the STI > 12.

In case of low stress resistance the STI <8.

The elite athletes have STI> 15 and it can reach 25.

PFI - personal functional index

Norm 50 +/- 10

Characterizes the performance capability, functional training level, durability and stress tolerance.

The elite athletes have a PFI> 150 and it can reach 300.

ALL OF THESE INDICATORS ARE VERY DYNAMIC AND OBJECTIVE

The indicators reflect the positive and negative effects of any therapy, which allows to control the treatment.

As a result of the diagnostics, they'll generate a comparative report, which will be used to make conclusions and prescribe treatment, as well as diagnose the condition of an overtrained athlete.

SPEED DIAGNOSTIC IS WIDELY USED BY SPORTS TEAMS FOR MORE THAN 5 YEARS

This system helps the physical therapist by not only measuring the FSO, but also focusing on its correction, thereby improving athletic performance.

The technology is already used by Russian national teams in biathlon, cross-country skiing, Nordic combined, freestyle, figure skating, short track, cycling, athletics, wrestling, as well as club hockey teams (hockey club CSKA, Tractor). The technology is used in the national sports teams of Belarus and Kazakhstan.

Integral monitoring system SpeedDiagnostic

MEASUREMENT OF FUNCTIONAL INDICATORS AT REST

SpeedDiagnostic provides the ability to diagnose and track the dynamics of the FSO, allowing the athlete to remain at rest.

This technology is an important tool for diagnosing FSO not only for athletes, but also for team members such as coaches, massage therapists, physicians and other team members.

INDICATORS (NORM FOR HEALTHY NON-ATHLETES)

SPORT	AGE	SITUATION	CR (4-6)	AR (400-600)	STI (8-12)	PFI (40-60)
Ski race	24	Victory at the World Championship 2021. The device showed peak values of all indicators 1 day before the competitions.	10.9	1 504	21.2	316
Figure skating	29	Victory at the 2013 World Championship. The device showed peak values of all indicators 2 days before the competitions.	8.1	1 056	17.1	181
Biathlon	29	Summer 2017, the device diagnosed an athlete who was preparing for the winter season with overtraining (early peaks) that was being caused by an incorrect training plan.	10.8	1 440	17.3	246
Biathlon (the same sportsmen during disease)	29	Before the competitive season (September 2017) he got sick with viral myocarditis, immediately shows a significant decrease in all indicators.	7.0	863	11.0	95
Fitness coach of the hockey club CSKA	45	In February 2015 shows a very good level of all indicators. Former professional hockey player, maintains a healthy lifestyle.	5.8	630	10.3	65
SKA hockey team medic (St. Petersburg)	55	Retired 3 months after testing (February 2016), not being able to stand hard training loads and busy schedule of traveling/flights with the team. AR, STI and PFI below normal	4.3	382	6.9	26

SPEEDDIAGNOSTIC IT'S NOT JUST BUSINESS!

This is our contribution to the development of sports medicine and saving people's lives.

Cooperate with us easy and convenient!!

Just 7 easy steps and SpeedDiagnostic will help you and your athletes achieve extraordinary results.

1. Free Master Class on your territory for your tasks
2. Signing of a contract based on the customer's requirements
3. Pre-payment
4. System assembly
5. Delivery during 1 week
6. Free setup (setup and sup port by our specialists) with the help of our specialists
7. Free support for 12 months - consultations and training

CONTACT US

In any convenient way
and sign up for a free master class!

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Experience the power of
SpeedDiagnostic for yourself!