



Media Information
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Mental training at Formula Medicine: BMW works drivers have been benefitting from progressive training philosophy for many years.

- **Dr. Riccardo Ceccarelli explains how his mental training philosophy works.**
- **Ceccarelli: “The more efficiently the brain works, the greater its performance and endurance under pressure.”**
- **Video: The BMW Junior Team in mental training:**
https://b.mw/Mental_Training.

Munich. Mental strength is playing an increasingly important role in motorsport. It’s not enough to simply drive fast if you want to be a world-class racing driver. Being able to deliver a top performance under pressure, in unpredictable situations or over a long period is what makes a champion. Dr. Riccardo Ceccarelli has set new standards with Formula Medicine when it comes to mental training. BMW Motorsport has collaborated intensively with Ceccarelli for many years now. The BMW works drivers and the BMW Junior Team benefit from his progressive training philosophy.

Video: The BMW Junior Team in mental training:
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Tuscany has been a favourite destination for the BMW works drivers for years. However, it isn't primarily the sea, wine or good food that draws them to the coastal town of Viareggio (ITA), it is the Formula Medicine training location. Up until the current COVID-19 crisis hit, Dr. Riccardo Ceccarelli and his team were the most popular port of call for some of the best racing drivers in the world, as well as many young athletes when they wanted to work on their physical and psychological strength – and will be once again after the crisis is over, because, be it medical examinations, fitness training or mental training, Formula Medicine offers a holistic programme.

The main focus is on mental training. “It is totally different to what was available previously,” says Ceccarelli, explaining: “Our philosophy states that mental training is



only there to optimise the performance of the brain. Many people only turn to a mental trainer when they have a problem that they want to solve. Our mental training is aimed at healthy top athletes and top racing drivers, who aren't having any issues and just want to further optimise their brain's performance. It is a totally different approach."

As the starting point for this new approach, Ceccarelli, who dreamed of becoming a professional racing driver in his youth and started working as a doctor in Formula 1 in 1989, followed the typical processes in motorsport. "In over 30 years in racing, I learned from engineers that objective data and its analysis are what is most important," says Ceccarelli. "We transferred that to our mental training. We developed our own hardware and software that we can use to measure brain performance objectively. During the analysis, a driver can identify their strengths and weaknesses directly from the data, like looking in a mirror."

Three levels of mental training.

However, the sober analysis of the status quo is only the first level. That is followed by the athlete's self-awareness, which is also incredibly important. "Many of the best racing drivers in the world are characterised by a high degree of self-awareness," said Ceccarelli, who knows the Formula 1 drivers Charles Leclerc (MON) and Daniel Ricciardo (AUS) very well and has worked with them intensively. "The best racing drivers are able to make really good assessments of themselves and are always striving to learn as much about themselves as they can. Only those who can assess themselves really well will be able to perform optimally in stressful situations. That is the key."

The third crucial point in Formula Medicine's mental training philosophy is efficiency. Ceccarelli explained that "When you optimise an engine, you try not only to get as much power out of it as possible, but also to make it as efficient as possible. We do the same with the brain: increase performance, while keeping the energy consumption as low as possible. The more efficiently the brain works, the more powerful and enduring it is under stress."

To reach the various levels, Formula Medicine uses a variety of forms of training and measurement techniques. Brain performance is recorded alongside exercises in concentration, coordination and response. Flexibility and adaptability of the brain is also trained. "If, for example, the weather changes quickly on a race weekend, the



driver must be able to mentally adjust to the new conditions within a short period of time,” said Ceccarelli.

Alexander Sims has benefitted from mental training.

One BMW works driver who Ceccarelli has worked with intensively in preparation for the current season is BMW i Andretti Motorsport driver Alexander Sims (GBR). After a few years in GT racing, he joined the ABB FIA Formula E Championship at the end of 2018 and initially found some difficulty in adapting to the totally new requirements of the race series. “Alexander made great progress preparing for his second Formula E season,” said Ceccarelli. “He was already a top driver before he worked with us. We simply showed him ways he could make even better use of his talent.”

The provisional result is that Sims started the first two races of the current Formula E season from pole position, celebrated a win and is currently third in the driver’s standings. “Formula Medicine is a fantastic place to be completely honest about your own performance and to work together constructively on improvements,” said Sims. “There wasn’t one specific measure that particularly helped me, it was more a few different levers that we adjusted to enable me to cope even better with the unique stressful situations in Formula E.” Sims is talking about the tools that the mental training gives him to be able to react better to increasing pressure than he did before. “It could be simply sitting on a chair and clearing my head, or very gentle physical exercises that help me get rid of the adrenaline.”

Teamwork is also a significant aspect in the work of Formula Medicine. In the run-up to the current Formula E season, Sims was in Viareggio along with his driver colleague Maximilian Günther (GER) and the chief engineer at BMW i Andretti Motorsport, Valentino Conti. “It was the first time that I had an engineer with me. It was really interesting, and was also very useful for us from my point of view,” said Sims. “I was impressed by how strong he was in some of the mental tests, much stronger than us drivers. It was really valuable going through the processes together, and growing together as a stronger team.”

BMW Junior Team spent two months at Formula Medicine.

BMW Junior Team’s two-month training camp at the start of the year also followed this ethos. Dan Harper (GBR), Max Hesse (GER) and Neil Verhagen (USA) underwent intensive physical and mental preparations for their first race appearances, lived in a shared house and grew together as a team. “The lads were open to our philosophy from the start and were willing to work hard on themselves,” said Ceccarelli. “These



are the best conditions for working successfully with Formula Medicine so I'm pleased that all three drivers completed the training camp with a great deal of enthusiasm and also grew together as a real BMW Junior Team on a personal level."

Developing talented young drivers is particularly close to Ceccarelli's heart because mental training can help them tap into their potential at a much earlier stage of their career. "Usually a racing driver reaches optimum mental maturity at 27 or 28," said Ceccarelli. "Our goal is for our training to help young drivers reach this maturity by the age of 20 or 21."

The Juniors were impressed by the training camp: "Personally, what I found most useful was learning how to assess myself better," said Hesse. "I'm already amazed how much I'm able to make use of what I learned while I'm running, doing weight training or am in the racing simulator. I have no doubt that this will also be the case later on when we are able to get back to real racing." Harper agreed: "As I was unaware of mental training before, I really made great progress. Even now, as we are at home and cannot train in Viareggio, we are having online sessions, which really help me to stay in good shape both physically and mentally." Verhagen said: "When I came to Formula Medicine, I soon learned that the brain is like a muscle, which has to be trained regularly."

It is not only the BMW i Andretti Motorsport drivers and BMW Junior Team who regularly take a trip to Viareggio. Formula Medicine has also become a second training home for the DTM and IMSA drivers, as well as for the BMW GT drivers. As soon as the current situation permits, no doubt the next trips to Dr. Ceccarelli and his team will follow.

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