

# Different strokes for different blokes

WATCHING the All Blacks perform their *haka* on Saturday got me thinking about the fascinating hidden physiological and psychological factors that shape behaviour in sport, and, more specifically, how the two interact with each other.

Our simplified separation between “mind” and “matter” needs rethinking, because some of the most interesting research on sports performance is telling us that what we see as the “mind” is actually the consequence of the “matter”, and this has important implications for how coaches interact with players in the hour before kick-off.

Among the many bridges linking the mind to the body are hormones, including testosterone and cortisol. Testosterone is the powerful anabolic steroid hormone that creates many of the physical differences between men and women. This includes strength and power, and is the reason it has long been a doping option for athletes. Testosterone also affects behaviour, and studies have found that judo participants with higher testosterone levels make more attacking moves during bouts.

Cortisol, on the other hand, is a stress hormone and it counteracts the effects of testosterone. If you're about to go into

DOCTOR KNOW

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“If you're about to go into battle you want high testosterone and low cortisol

battle against the All Blacks, then what you want is to have high testosterone, without doping, of course, and low cortisol levels.

How this is achieved is the focus of some recent research, and the early evidence suggests a more powerful effect than you might have anticipated.

One research study was done with a professional rugby team in the UK, and tested different pre-match motivational and tactical strategies in the hour before a match. On one occasion, a group of the players watched a video of themselves successfully executing skills in their previous match. While they watched,

their coaches gave them affirmation and positive feedback.

Another group watched their opposition successfully executing skills while receiving cautious feedback, for example “do not let the player get away with that” in the upcoming match. During the subsequent match, the coaching staff rated the players' performances.

You'd think that professional rugby players, sufficiently motivated and used to the pre-match routine, would be unaffected by such an innocuous-sounding pre-match strategy. You'd be wrong — it turns out the groups performed quite differently, and it appears that the testosterone and cortisol levels are the reason.

The players who watched themselves succeeding and who received positive feedback had the largest increase in testosterone, the largest decrease in cortisol and strikingly better match performances as judged by a coaching group.

The negative feedback group, who watched the opposition succeed, responded in exactly the opposite way — the worst performances, lowest testosterone and highest cortisol levels.

We know from other studies that higher testosterone makes athletes stronger and more aggressive, and so it is as if the

positive feedback was “tuning” the players “hormonally” for more aggression and better performance. Now, there are some questions against this study, but what it does hint at, for the likes of [Springbok coach] Heyneke Meyer, is that opposition analysis should be done early, so that it is out the way by the day of the match. The match-day focus should be on positive execution, avoiding criticism and affirming success. This may sound obvious, but you'd be surprised at just how often coaches approach match-day with a “don't do this” attitude, and physiology now points out the potential error in that way.

What does this have to do with the All Black *haka*? You may think it trivial, but the research says that what players see before performing has a very real and large effect on their performance. Seeing the *haka* may act like the negative criticism in the study I described, raising stress hormone levels and decreasing testosterone. On the other hand, a player with the right psyche may accept the challenge in a positive way, increasing testosterone levels.

It's all about tuning the mind, and therefore the body, and coaches would do well to recognise this to prepare the players to take the best possible response.

## Marquez dream deferred

MARC Marquez's hopes of setting a record 11 straight MotoGP wins ended yesterday as Honda teammate Dani Pedrosa won the Czech Republic MotoGP in Brno.

Pedrosa, who also won at Brno in 2012, finished the 22 laps on the dry 5.4km circuit in 42 minutes and 47.8 seconds, ahead of Yamaha duo of Jorge Lorenzo and Valentino Rossi, with Marquez finishing fourth.

Marquez was looking to become the first premier class rider ever to win the 11 opening races of a season.

Italian legend Giacomo Agostini won the opening 10 races of the premier class season in 1968, 1969 and 1970 at a time when he dominated the sport.

But no one has ever won the first 11 — in part because Agostini's perfect season in 1968 comprised only 10 events.

Marquez, who failed to make it to the podium for the first time since Australia last year, still tops the championship with 263 points, 77 ahead of Pedrosa and 90 ahead of Rossi. Marquez got off to a poor start from pole, dropping to sixth place.

Lorenzo soon settled down at the front, followed by Pedrosa who overtook him on the sixth lap to nurse his lead, with Lorenzo never really getting close enough to fight back.

Said Pedrosa: “I didn't plan the race in this way, but fortunately Jorge opened a gap immediately so I had to change my plan and then push to the limit.”



STREAK BREAKER: Spain's Dani Pedrosa of Repsol Honda won the Moto GP of the Czech Republic's Grand Prix in Brno, ending Marc Marquez's run of 10 successive wins  
Picture: AFP JOE KLAMAR

“I kept my rhythm until the end but in the end I struggled with my rear grip and was not able to go out strong in the corners.”

Said Lorenzo: “Finally we beat Marc, but unfortunately it wasn't me, it was Dani. After two laps I started feeling not as well as in the first laps and Dani cut me and passed me — and went away. The bike wasn't so bad at the end of the race so I tried, pushed to the limit to cut him, but it was too late.”

Marquez moved up to third after a few laps but instead of narrowing the gap on the two leaders, he found himself under heavy pressure from Rossi.

Shrugging off a heavy crash in Saturday's practice in which he injured the little finger on his

left hand, Rossi — who has won five premier class races in Brno — breezed past Marquez midway through the race.

He finished more than five seconds ahead of the champ-

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onship leader for his 190th podium finish in all classes of motorcycle Grand Prix.

Said Rossi: “I was able to do a good race, I'm happy, I had a good pace and it's another podium. It was a great pleasure to beat Marc one time.”

Earlier yesterday, Spanish Moto 2 championship leader Esteve Rabat dominated the race in his category ahead of Finnish teammate Mika Kallio.

And, in Moto3, Frenchman Alexis Masbou took his first career victory in a finish that saw 16 riders cross the finish line within two seconds. — AFP

### TV HIGHLIGHTS

**TODAY**  
**Crick:** Fifth Test, day 4, England vs India at noon on SS2  
**Soccer:** English Premiership, Burnley vs Chelsea at 9pm on SS3; Varsity Cup, Kovsies vs NMMU at 4.30pm on SS4, UJ vs UCT at 6.45pm on SS5Select; friendly, Gampfer Trophy, Barcelona vs Leon Guanajuato at 8.30pm on SS5