



# Innate Intelligence

Looking after the power source within your brain and spine, known as 'innate intelligence' will allow you to enjoy cycling, and life, even more. **Dr David Stapleton** and **Dr Billy Chow** share their knowledge.

Have you ever stopped to think just how magnificent your body really is? And I don't mean the last time you looked at yourself in the mirror either. What we mean is, have you ever thought of just how outrageously clever your body really is? While it's easy to take life and everything we do for granted it's even easier to think that in cycling we just hop on the bike and pedal like crazy. But there's more to it than that, especially from a physiological perspective. Have you ever taken the time to think about what actually drives your body, the mechanism that actually thinks for your body or how your body functions, in an ultimate bid to survive let alone perform at its peak?

## Magnificent Machine

It's pretty amazing that your heart pumps about 340 litres of blood an hour through more than 100,000 kilometres of blood vessels without you even thinking. It can make over two million new red blood cells every second while it's turning your breakfast into proteins, carbohydrates, glycogen and numerous other goodies at the same time. And while it's doing that, several thousand kilometres of interconnecting nerve cells

control every movement, every thought, sensation and emotion by sending instructions from your brain to every other part of your body at well over 402 km/h. And while it's juggling all that, it's renewing your stomach lining, creating new bone cells, breaking down old ones, performing some of the 500 different liver functions and producing some of the litre of saliva that you're about to use today. Once again, all while you're blissfully unaware. In fact in the time that you've taken to read this last paragraph some 50,000 of your cells have already died and been replaced. While these are only just a few of the enormous amount of tasks that your body regards as routine and performs for you 24 hours a day seven days a week, have you ever stopped to think of what actually drives it? It's been given many fancy names over time depending on who you talk to but chiropractors simply choose to call it 'innate intelligence'. That is, the inbuilt intelligence or power source in your brain, the computer if you like, that silently runs your body for you with the wisdom of nature that within itself is so amazing it's hard to understand at the best of times.

Imagine this. You're on your bike, early morning, and ready to go. After stepping out of the door your inbuilt senses within your nervous system transmitted information from your brain down your spinal cord, telling the rest of your body about the external environment, the air temperature, your skin temperature and an unimaginable array of other data. You react to it accordingly as your body adjusts to maximise itself in a totally unconscious way. As you continue to work hard on the bike the same mechanism will, amongst a whole assortment of other amazing tasks, regulate your oxygen uptake, your heart rate, respiration, muscle response and in keeping with a rapid increase in body temperature will now regulate the cooling mechanism we all know as 'perspiration'. Yet once again you didn't even have to think about it.

Here's the point. Have you ever stopped to think of what would happen if just one of these mechanisms malfunctioned or worse still if the

nerve power, that is, the 'innate intelligence' that makes these things work was suddenly reduced or, in some way compromised?

In our previous articles in this series we discussed the role and function of your spine and nervous system and how you can significantly improve your cycling performance by reducing what's referred to as 'vertebral subluxation'. We explained that 'vertebral subluxation' is what happens when the bones of the spine misalign and put unnecessary pressure on the nerves feeding the rest of the body and how it can 'choke' your nerve supply, ultimately reducing your 'nerve power' and your performance as well as creating new injury and exacerbating old problems. You may also remember we used an example of a hose delivering water to your vegetable garden and explained what would happen if you stepped on the hose. We also discussed how misalignment of the spinal vertebrae can very often present without pain and how it can result from a biomechanical instability of the body's skeletal structure. Just as important, we also mentioned how it can then refer to various areas of your body ultimately intruding on the dynamics of your cycling position and severely sapping your performance.

Chiropractic deals specifically with the central nervous system which therefore provides a particularly broad spectrum of application in terms of the various needs required by all athletes, not just the elite. In particular, it has become increasingly popular in cycling, especially professional cycling because of its functional ability on many levels. It's what is often referred to as the Chiropractic Triad and consists of three strata's of application (see figure 1)

## Acute Injury

In any elite sport the entire focus of the supportive health professional is to keep the athlete in peak condition, which for most of the time is easier said than done. Cycling in particular is a sport where fine tun-

ing is paramount and can often be obliterated by various things such as overworking, postural instability, or the odd crash or two. Very often it's a matter of applying treatment just to get the rider back on the bike at any cost with the solitary goal of just finishing the stage and working on the fact that 'tomorrow is another day'.

In the opening criterium stage of the 2006 Tour Down Under we saw a member of the Bouygues Telecom Team crash and significantly injure his upper back and shoulder. His team manager sought our services immediately for both the injured rider and the rest of the team. Chiropractic was used to provide assistance with his acute injury, that is, our job was purely to get him back on the bike and fully functioning for the next day. In the process the entire team had chiropractic adjustments every day with particular focus on the injured rider who, as a result was able to actually get up and post a third and a fifth in two stages of the tour. It's always amazing just how efficiently the body can respond if the musculo-skeletal system is returned to a balanced and stress free condition. Like a huge number of Europeans, Estonian National Champion Jan Kursipuu is well aware of chiropractic care and after having some huge difficulty with loss of power in his legs during the initial stage of the Tour Down Under he



Figure 1

A properly aligned spine and pelvis free from subluxation allows optimal nerve flow to all muscles, organs, tissues and cells, ultimately improving performance.



Figure 2

Subluxation causes the spine and pelvis to be misaligned and unstable, resulting in interference to normal function of the nerve system reducing overall body performance.

clearly benefited from regular adjustments, as did the rest of his team.

Dr Jeff Spencer, Lance Armstrong's chiropractor, will tell you exactly the same story which is why he was adjusting Armstrong and the entire Discovery team every day during the 2005 Tour de France. Bjarne Riis has his CSC team looked after in exactly the same way and valued the performance advantage so much that he refused Claus Moller from a rival team access to his chiropractor on the basis that "If we treat others and they beat us, how will we forgive ourselves?"

Stuart O'Grady, who proved to be one of the Tour's toughest competitors this year, finished the race in spite of two fractured vertebrae, again with thanks to the chiropractic care provided for him by Team CSC. This once more showed that an optimally functioning spine and nervous system will maximise the healing process.

## Recovery and Maintenance

As we know your body has an incredible ability to both regulate and heal itself. Simply, if you cut yourself you don't have to consciously heal yourself; your body will just do that automatically for you. Or, if you break your leg your brain has the ability to not only recognise that break but is able to put all the necessary mechanisms in to action immediately to start the healing process. And it does that beautifully, providing the healing pathways are not 'blocked'. Chiropractic care plays a vital role in keeping the spinal vertebrae well aligned and therefore 'unblocked' or 'subluxation free' allowing full unobstructed neurological 'flow'. This of course is the ultimate ingredient for quick recovery under any circumstances.

Traditionally, we've always looked at exercises as being the remedial

answer to all injuries. There's no question that very specific exercise can be of huge benefit to any rehabilitative process and no doubt remains an extremely important part of it. But beware, exercise can be a bit like fire...it can either warm your house or burn it down. In the same way exercise can be either therapeutic or sadly, just as antagonistic. Just be very careful as to how, when, where and what you exercise. Even more importantly, should you be dealing with pain or injury from a biomechanical source, always make sure that you have the problem analysed correctly by a professional and then set about attending to correct the structural cause before you do anything else. Dabbling in the suppression of symptoms or pain is not a good idea and don't be blinded by where and how much it hurts. Proper assessment can often reveal that your pain may well be referred from an entirely different nerve source. Just as you would want to make sure a fence post was nice and straight and where you wanted it before you cemented it in place, it's also prudent to make sure that your skeletal structure is balanced, mobile and aligned before you exercise the surrounding and supportive soft tissue and musculature in a rehabilitative sense.

## Performance Enhancement

Each year we are witness to athletic performances in all sports, drawing closer to the limits and capabilities of the human body. Every athlete, from the professional to the weekend warrior or budding school kid, now wants to have every advantage possible. Performance equipment and personal coaching were once only accessed by the elite professional, whereas these days they are now available to almost anyone who can afford them. Whether it is the carbon fibre bike, aero-race wheels, sophisticated sports nutrition, high powered personal coaching or the latest in scientific training methods, they're all available to anyone who dares. But here's the irony. Often in the stampede to have the latest equipment and the space-age training schedule, with the expectation of an instant elevation in performance, we lose sight of what it is that we are actually training. Is it the body or the bike? We often wonder why, despite having all those things, we sometimes never get beyond a 'sticking point' in our perfor-

mance or don't quite make our goals due to continuous training injury or why we appear to be slow to recover after a hard workout. Maybe your body holds the key but you just don't know it yet.

Research conducted in 1991, published in the Journal of Chiropractic Research and Clinical Investigation, indicated that chiropractic care may well improve athletic performance by as much as an enormous 16.7% and concluded that 'subluxation-free' athletes were able to react faster, coordinate better and execute fine movements with improved accuracy and precision.

Think about this. If you could suddenly purchase the latest hi-tech addition for your bike that could improve your performance by 16.7% wouldn't you want it? The fact is, you have the potential right now. All you need to do is get yourself checked to make sure that spinal misalignment and vertebral subluxation is not holding you back.

So next time you're on the bike, whether you're punishing yourself up that monster hill, grinding it out on the flat, or whether you're just out soaking up the many joys of the best sport in the world, take some time to think about how clever your body really is. Celebrate the fantastic gift we all have, that power source nestled within your brain and spinal column we call 'innate intelligence' that's thinking, directing, controlling and doing everything for you right this very minute. Perhaps think about how you could look after it a bit more, whether it's being more selective in the nutrition you feed it or being more thoughtful as to how you treat it with alcohol, tobacco, chemicals and stress.

Either way, it's designed to be with you for the long haul and will always perform for you in the best way it possibly can, providing you take the care to keep the nerve pathways open, maximise its potential and maintain it accordingly.

David Stapleton (DC, Grad Dip MuscMgt, M. App.Sc) and Billy Chow (B.Sc (Physiology), B.App.Sc(Clin), B.Sc (Chiro) are chiropractors with an unashamed passion for cycling. They provide a facility for chiropractic sports performance assessment and musculoskeletal correction in Adelaide, South Australia, where they are chiropractors for the Savings and

Loans cycling team. They also assisted Jaan Kirsipuu, Credit Agricole, and Bouygues Telecom during the 2006 Tour Down Under.

All proceeds from their initial consultations are donated to the Amy Gillett Foundation.



Unstable posture results in subluxation of the upper thoracic spine causing this rider pain to the shoulders, restricted movement in the neck and loss of performance. Graphics • Duncan

## Dedication

Vale Peter Geoffrey Brock 1945—2006, special chiropractic patient, Patron of the Australian Spinal Research Foundation, Chiropractic and wellness educator and champion for road safety and awareness.

## Performance Enhancement (Going for gold)



CHIROPRACTIC

Recovery and Maintenance  
(Getting back to form  
and staying there)

Acute Injury  
(Getting back on the bike)

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