

INDIA'S FOREMOST HEALTH MAGAZINE With Latest Updates From Top International Sources

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HEALTH

& NUTRITION

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NEWSSTAND COPY

10 Healthy Foods you should be eating

MORE SEX, BETTER SEX!

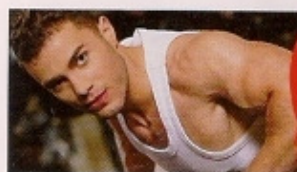
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LESS STRESS

HIGH EXPECTATIONS

Former physio of India's A-list cricket team John Gloster (right) speaks to *Health & Nutrition* about high altitude training, Pilates and his stint with the men in blue.



What was the idea behind launching a fitness studio specifically dedicated to Pilates and Altitude Training Systems? Who is it aimed at?

The whole idea of starting a studio offering a combination of ATS (altitude training systems) and Pilates was to make people work out smarter and thereby derive greater benefits. I was introduced to the benefits of ATS many years ago but started using it intensively 3-4 years back to help Australian cricketer Shane Watson recover from a host of injuries. Watson benefited hugely from this therapy and earned a berth in the national team. That caused me to look at ATS therapy more closely.

In my 18-year-long career as a physio I have always believed that the way injuries are treated has to be very individualized which is why such a studio is a necessity. ATS enhances aerobic performance and oxygen utilization that ultimately boosts the immune system and acts as a cardiac rehab. Pilates, which has been around since the 1930s, promises to strengthen the core muscles and improve posture, balance, control, strength and flexibility. This training blend has been well established in Australia and all around Europe amongst the athletes for the past 40 years.

My studio is the first of its kind in India. The Pilates-ATS combo works wonders not just for athletes but also for the general population.

Explain how ATS works.

Let me give you a lesson in biology. The



Pilates expert Samir Purohit demonstrates a move



Australian all rounder Shane Watson

human body needs ATP or adenosine triphosphate (the energy producing molecules within a cell) for any kind of physical activity.

Now take the example of running. As the runner starts off each cell in the body uses ATP to create energy. The problem is that the body runs out of its existing stock of ATP in about 10-12 seconds. As the run continues the body now raids the glycogen stored inside each muscle cell and breaks it down into glucose, which it uses to make ATP. This process is slightly more time consuming as it takes almost 12 chemical reactions to generate ATP this way. Even this process runs its course in about 2 minutes or so.

Remember that all this happens without drawing on the oxygen in the lungs.

As the run goes beyond 2 minutes, the body realizes that much more ATP is needed and starts using any amount of oxygen it can find in the blood. It draws energy from glycogen and by burning stored fats through oxygen-dependent reactions.

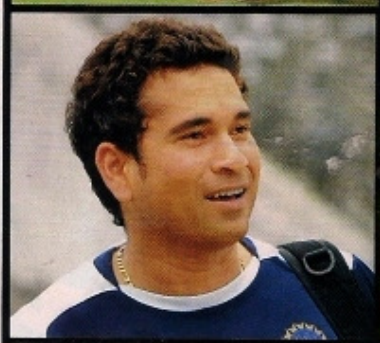
Now this process is even more time consuming, but produces huge amounts of ATP. The reaction of oxygen with glucose from glycogen produces 36 molecules of ATP and in the case of fatty acids 130 molecules. Without oxygen it can only produce 2 ATP molecules!

The basic idea of ATS is to train in a low oxygen (hypoxic) environment. The routine may be the same — running on a treadmill, cycling, Pilates, freehand and floor exercises — but because they are performed in a hypoxic environment that is artificially created inside the studio, the exercises can achieve results in shorter time without putting extra pressure on the skeletal systems.

An hour of high intensity work out at sea level is equal to 30 minute low-moderate intensity workout at high altitude or in an ATS chamber. The energy producing mechanism in the body moves at a different intensity. It almost doubles with effective usage of oxygen in the blood (VO2Max); there is more breakdown of glycogen as well as of stored fat. This in turn promotes better heart rate and lower blood sugar levels. Because the physical activity doesn't tire easily which leads to a more efficient workout. But we monitor the situation of the client at every point with the help of pulse oximeter for oxygen saturation levels in the blood which is critical.

The fact that people residing at high altitudes are usually the longest living and have the leanest body type is in itself an example of its usefulness. Even people with asthma benefit. ATS is also a great option for sportsmen who are keen on maintaining peak cardiovascular fitness while recovering from an injury.

In fact most European countries boast of entire gymnasiums built in high altitude set ups for people wanting fast results. Almost all football clubs, health centers and yoga centers abroad have been using the ATS for years now.



What kind of injuries can physiotherapy help to heal?

A well trained physiotherapist can handle any type of injury, be it sporting, recreational or overuse. So anything from back pain to headache to post knee replacement therapy can be tackled provided the problem has been correctly diagnosed. This is vital because if the damage has occurred to the central nervous system, esp the spinal cord, there is little chance for total recovery. If the case is partial paralysis, and the muscles are still responding to stimulus then, through the use of the therapeutic exercise, deep tissue massage and various techniques involving heat, water, light, electricity and gadgets, a person can recover use of his limbs to a sizeable extent. Even when surgery is advised physiotherapy is vital to complete the healing process post op.

What type of injuries are cricketers most prone to?

Injuries differ from person to person but they are mainly due to overuse and tough conditions like hard and poorly maintained training surfaces.

Most players suffer stress fractures in the lower limbs, shin splints, lower back and shoulder injuries due to muscle weakness and poor throwing and bowling techniques, and fatigue related injuries as a result of dehydration.

Sportsmen need very strong cores, so they are prescribed stability exercises such as Pilates for the lower back and abs, special exercises for the shoulder using Thera bands (elastic resistance bands) to strengthen the weak areas and so on.

Of course, where pro cricket is concerned it's not just a matter of giving a course of physiotherapy to an injured player. The stakes are high, there are millions of rupees riding on each player and there's intense pressure from the managers,

the media, the fans and the team to get him back on the field as quickly as possible. As it happened with Sachin Tendulkar in 2003 when he developed a tennis elbow. Even if the player himself is anxious to get on board the team, the healing process cannot be hastened without risking permanent damage to the injured area.

The challenge is to know how much recovery time can be forfeited and this can only come with years of experience dealing with top level sportsmen who are often overloaded and yet have to remain at peak fitness level.

How has your experience with the Indian team worked for you?

After dealing with all those external pressures — the media, the coaching staff, the management, the constant traveling and attending to players' problems 24x7 — I've become more disciplined and more attuned to a person's needs. If I don't connect with a client on the same wavelength I cannot invite his confidence or exert my authority and therefore will fail in my job of treating him effectively. So you can say that I'm more tolerant, humble and versatile now, a technician who is culturally aware and able to think out of the box.

SMRITHIN SATISHAN