

Brazil shoots for sixth world cup football championship. Will Biodex get an assist?





Brazil Football Championship

Football fans across the world are already eagerly anticipating the 2014 FIFA World Cup Brazil international football championship which kicks off in Rio de Janeiro on June 12. As is often the case, the storied Brazilian national team, which has in the past featured some of the top football talent of all time including Pele' and the super striker, Ronaldo, is expected to seriously contend for the ultimate goal and they've selected Biodex Medical Systems, Inc., to help play a supporting role.

"With the World Cup coming to our country for the first time," said Brazilian team physiotherapist, Luiz Alberto Rosan, head of the physical therapy department, "we've been able to make major upgrades to our facilities and equipment. With such a great opportunity, you can bet we've been very particular in making our choices. In the assessment, testing and rehab area, my staff and I have chosen the Biodex System 4 Pro Multi-Joint Testing System because it couples reliable, cutting-edge technology with exceptional dependability."

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A Decision Based On Trust

A primary factor that entered into Team Brazil's decision to add the Biodex System 4 Pro to their testing and rehabilitation arsenal was trust. Dr. Rosan and his all-star medical staff consisting of three doctors, two physiotherapists, two massage therapists, a nutritionist and an exercise physiologist, have a long-standing relationship with their Biodex distributor in Brazil. Rosan's medical department is quite experienced with members having participated in three World Cups, six Conferacóes Cups, plus a wealth of major football events around the world.

"My staff and I take the relationships with our equipment suppliers very seriously," explained Rosan. "I know our Biodex distributor, CARCI, to be highly respected and they have been very supportive over the 30 years in which I have dealt with them. They have earned my trust because I know that if a problem arises at any point it will be



addressed quickly and professionally. With the World Cup being held in Brazil for the first time, selecting the best equipment is a big responsibility. Repairs here for high-end technology can be problematic and time-consuming so customer service is a big selling point. Between the strong service record of our distributor, and the Biodex reputation for high-quality, dependable equipment, I felt very secure in making this choice."

Although the Biodex System 4 Pro will be a new piece of equipment for the Brazilian team, its physical therapy department is already familiar with its applications. Rosan has used various isokinetic dynamometers regularly since 1984 for assessment, establishment of baselines, testing and evaluation purposes among both elite football players and the general population, and several of his staff used Biodex equipment at World Cup Korea/Japan, Barcelona Teknon Institute, World Cup Germany, and for evaluation of South African players on CT Atletico PR when they visited Brazil.

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Mega Expansion Brings Great Opportunity

The new and very grand Confederação Brasileira de Football (CBF) training center at Granja Comary, Rio de Janeiro, where the Brazilian national men's and women's football teams train and club teams Campeonato Brasileiro Série A and Flamengo work out during the preseason, has undergone a mega expansion to meet the demands of a growing population and the pressures of hosting a World Cup event. According to Rosan, this training center is being prepared to meet all the needs of football players in any category, which means the medical department gets an upgrade. That includes more tools for assessment, rehabilitation and training - a perfect fit for the Biodex System 4 Pro. Several years ago, the staff here began establishing protocols to build a database for athletes seen repeatedly over time. It is expected that data gained from Biodex assessments and through continued testing of these athletes will now help contribute to the growing database at this facility.

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"We use isokinetic testing and evaluation during preparation for tournaments but we stop using it once the competition begins," explained Rosan. "One thing we look for is muscle imbalances between agonist and antagonist groups. Marked deficits in this area likely need to be addressed with an integrated approach to bringing about better balance between the specified muscle groups. We find that having muscular balance inside the standards of normality contributes greatly to the reduction of injuries. Therefore, we seek to establish equal strength, power and muscular endurance within defined parameters to the best degree we can."

Of course, that task can be somewhat challenging given players at this level travel from contest to contest – sometimes continent to continent – making it difficult to keep them on a regular rehabilitation schedule here. With the Biodex system now on hand, however, deficits can be better quantified and reports can be generated that note improvement, show where more work is needed, and motivate athletes to increase their strength.

Of course, with any deficit or injury, notes Rosan, it is important to cure the trauma first, and then continue to address the muscle imbalance across multiple years using various modalities in an integrated approach that accelerates the process of rehabilitation.

Increase Player Longevity

Rosen points out that the Biodex Multi-Joint System 4 Pro is just as helpful to ordinary patients as it is to athletes. At the professional level, however, many teams now regularly perform assessments and evaluations to help discover muscle imbalances – and this, he believes, is making a significant difference in terms of keeping players on the field.

"My database shows," states Rosan, "that athletes having muscle balance of specific groups are less prone to injury - but to say that they will not get injured if the balance is within norms would be a stretch. While I strongly believe that the equipment helps to improve the performance of the elite athlete - this is evident in my daily life as a physical therapist – I cannot measure exactly how much in percentage terms.

That said, Rosan does allow that both athletes and the field of physiotherapy have benefitted broadly with recent advances in technology, including introduction of cutting-edge isokinetic systems like the Biodex Multi-Joint System 4 Pro.

"It's evident," he states, "that improving technology has resulted in added longevity for all types of athletes. Today we have players of advanced age continuing to excel at their chosen sports in a natural way. This simply wasn't the case before the introduction of recent technology and new surgical techniques. I know countless Brazilian clubs now have Biodex equipment, as do various universities, and I would recommend it without a doubt. I believe it contributes to more reliable physiotherapy, bringing greater reliability to the success of rehabilitation."

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Chasing The Cup

As for Brazil's prospects in this year's World Cup extravaganza, Rosan likes his team's chances.

"We showed we have the talent and determination to win in big games by taking the Confederations Cup in 2013," he said. "Now, we'll be playing in front of our own fans! That should really motivate out athletes! Winning a tournament where the best teams in the world are all competing will be extremely difficult, but I fully trust in the potential of this team and our coaching staff. Now, if only I can get them all to come in for baseline testing..."

And who is likely to be the biggest star in this year's World Cup?

"Don't look for one player to make all the difference," warns this Brazilian football fanatic. Sure, it's the attackers that you'll notice, but the best teams rely on all 23 players. It takes the help and support of everyone to win at this level, even the players on the bench. The teams that understand this fully are the most dangerous and usually play the best."



Luiz Alberto Rosan Physiotherapist, Brazilian National Football Team

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