Felix Fernandez, a Spanish physiotherapist, explains its characteristics.

# THERAPEUTIC GOLF©, A GROUND-BREAKING TREATMENT TECHNIQUE SET TO RECOVER THE NEUROMOTOR CONTROL SKILLS AND ABILITIES OF THE NERVOUS SYSTEM.



In this interview, Felix Fernandez, (Lugo, Spain) and his "Fisioterapia Ronda" team tell us about Therapeutic Golf©, "a technique that –according to Mr. Fernández- can be very effective for disabled people".

## -Please, tell us about "therapeutic golf"

-Therapeutic Golf© is a ground-breaking treatment technique that is used with the objective of recovering the neuro-motor capacities and skills of the nervous system. It combines a number of controlled movements that are actually performed in such a sport as golf, only to integrate those (movements) with the specific needs of motor control in order to execute body movements, with the clear goal of working on the affected body areas.

# -Can this therapy be considered to be a form of therapeutic physical exercise?

-I would rather call it therapy through sports. Actually, golf is used here because it is a precision sport that involves intense neuromuscular control.

## -What is the difference between Therapeutic Golf© and Adapted Golf?

-Well, adapted golf arises as a leisure sport specially designed for disabled people. Its main goal is that of entertainment and game. Among their typical players, we can find limb-amputated people or spinal cord injured subjects suffering from low-back injuries. These patients use special chairs that help them keep a standing position, therefore enabling them to play golf.

By contrast, Therapeutic Golf©, as its very name involves, is a therapy in which the patient, who has just arrived at the Physiotherapy room, goes under treatment with very specific goals, due to the fact that controlling the body movement under a therapeutic strategy becomes the most urgent task. Here,

getting the ball in the hole is absolutely secondary, as, for some patients, the simple fact of standing on their feet and executing part of the swing movements result in a great success.

Moreover, this kind of therapy is highly motivating, as the patient breaks away from the standard line of treatment that, in some pathologies, affects the nervous system, thus using up their treatment possibilities.

The patient shows an extra motivation on the grounds that, in a golf course, the environment is natural, and therefore, the patient is more relaxed and tends to somehow forget about his or her illness. In some cases, family and social pressure can be really big, so I think that it is a good way for patients to recover their self-esteem.

#### -How did you come up with this idea?

I had this idea by chance, while I was playing golf; after playing a few holes I watched a few players practicing on the putting-green. In fact, they were performing precision movements with the upper limbs with the objective of putting the ball in the practice holes. Because in "Fisioterapia Ronda" we use the "Lokomat" machine to work with patients and recover their lower limbs, I was really looking for some strategy that might help us work with the upper limb. That is how I had the idea.

## -When did you begin to use the therapy?

-I came across this idea back in 2007, but it was not until 2009 that I carried it out, as I had to count on the Lugo Golf Club permission; but once the first tests were performed, everything became easier.

#### -What types of pathologies can this technique be used for?

-Well, the best results are achieved for brain stroke and traumatic brain injury (TBI), although we have also treated patients with an advanced degree of multiple sclerosis, on which we got surprising changes.

We have also tested it in patients with problems in the brachial plexus, so as to reinforce the neuro-motor control and also try to recover the maximum independence of mobility and hand skill.

In addition, there are other pathologies that are suitable for this kind of treatment, and, depending on the degree of affectation and its type, we evaluate them and hence we integrate them in their therapy.

#### -What are the benefits of the application of this technique?

-A lot of them. In patients who are in a control phase of either the standing position or the walking process, it helps with stabilization, with the trunk and

also with the hip dissociation. In addition, this technique allows us to work very well with the body weight transfer processes due to the golf "swing".

The physiotherapist may demand specific exercises to work on a body area or to affect the development of areas of the nervous system in a much easier way than the standard therapy.

Distance calculation, eye-hand coordination and a great deal of motivation will make changes possible in the first day of treatment.

## -Can it be considered as a complementary therapy?

-It is complementary and beneficial both for the patient and physiotherapist. Patients love it.

#### -How often do you advice to practice it?

-At the beginning, we did it once every 7 or 15 days. But I liked the results obtained so much that we have constructed a "therapeutic green" inside our clinic, imitating the greens in the golf courses. In this way we can do it as many times as we consider necessary, within the therapeutic use.

I think we are the only clinic in Europe, or even in the world, that have integrated a putting-green in the programs with which we treat disabled people.

# -Tell us about your pilot experiences developed in Lugo as well as their results.

-The experiences in the golf field are very rewarding for the patients, as, in the first place, they are in a beautiful natural environment.

The first time, we started treating four patients. Then, we were shocked to see what a great deal of attention patients showed when it came for them to set their own objectives; this was so much the case that we achieved results that were unthinkable in a clinic environment.

Later on we have established groups of 10-12 patients and we also created a great work atmosphere among them. We really enjoy seeing them work. These experiences are very rewarding. They are a lot of fun.

## -Are you working on a research work from the results obtained?

-Yes. I have considered it for a long while as we have obtained very good results in the short term. I would like very much to better understand what is really going on with this revolutionary therapy.

#### -Are you in touch with any universities for that purpose?

-I have a good relationship with British universities that showed their interest in this therapy; Dr. Eyal Lederman is a good example of this interest. Mr. Lederman is a doctor in Physiotherapy by the King's College of London, as well as a very prestigious researcher, he is a world authority in neuro-rehabilitation. Dr. Lederman has also achieved interesting findings about the neuromuscular control in different kinds of the nervous system diseases. They range from the brain stroke to a fracture and Dr. Lederman explains the adaptation process of the nervous system after an injury as well as how motor control works for a fast recovery.

On the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> of April of 2011 we will hold a course called "Neuromuscular Rehabilitation", with Dr. Lederman as our host, organized with the help of the Galician (Spain) Council of Physical Therapists, to be held at the University School of Physiotherapy in A Coruna. We will set the example of Therapeutic Golf© as a functional approach within neuro-rehabilitation. It will be the first Spanish university in which this course will be held.

# -Have you considered establishing collaboration with institutions or patient associations?

-There has been some contact on a local level and we have collaborated with an association of brain damage. We hope to continue this line in the near future although we are open to other ways of cooperation and proposals. Patients are always the top beneficiaries.

# -Have you received any requests to export the Therapeutic Golf© to other regions or countries?

-My colleagues have congratulated me. The president of the Official Association of Physiotherapists in Galicia (Spain) has given me his support and I want to thank him for that. There is interest in Madrid and Andalusia. But the interest is not restricted to Spain. I have received information requests from Switzerland, specifically from the Humaine Klinik, near Zurich, a ground-breaking neuro-rehabilitation clinic: his director, who is a renowned and prestigious doctor, has taken a great interest.

Next year we are going to present this technique in Italy, in the Marche region. Here, the contacts have progressed a great deal and we hope to put it into practice soon. I hope this can be done in many other places.