

## VILNIUS 2004

### SPEECH

The aim of this work is to focus on the essential physical conditioning preparation for the high performance in fighting sports, specially in tkd. As well as the integration between physical planning and technical-tactical planning. To get this point I'm going to explain the physical conditioning preparation of the Catalonian TKD Team for the Euro-Cup 2003. (Film)

Unlike team sports that have weekly competitions, in tkd there are only two or three important competition a year. It chows the need for an accurate planning to be sure that the competitor arrives to the most important championship as fit as posible.

On the one hand the physical conditioning preparation becomes essential in tkd. A lot of technical actions demand a high rate of flexibility. The kineantropometric characteristics are very important as well, so a big size, specially for the legs will make the application of differents technics easier. As well as the importance of the explosive strength and the speed of tactics and reactions . The big demand of movement during the rounds and the time structure offers outstanding athletic aerobic capacity.

On the other hand the integration between the physical planning and the technical-tactical one in this sport is the key in order to achieve a high performance, due to the close relation between both of these components.

Sixteen weeks before the Euro-Cup we establish a strength planning, paying special attention to improve the maximal strength and, then transform it into explosive strength and tactical and reactional speed.

To begin with, I'm going to talk about the objectives that we proposed to get this Euro-Cup as fit as posible. Afterwards

I'm going to list all the contents, physical conditioning exercises, as well as the mental training.

### **OBJECTIVES:**

- To improve the conditioning capacities of the explosive strength, tactical and reactional speed through an integrated support of strength.
- To improve the tactical response under fatigue conditions.
- To improve the special agility through acrobatic activities.
- To improve the concentration and relaxation thanks to specific planning.

### **PHYSICAL CONDITIONING ACTIVITIES:**

- Anatomic adaption strength directed towards achieving neuro-muscular adaptations.
- Hypertrophy strength focusing on structural strength training.
- Maximal strength supporting the most important techniques, through basic exercises that involve the main muscles and articulations.
- Reactive exercises after basic strength training to transform the general strength into specific.
- Specific reactive exercises after strength training with specific actions such as kicks.
- Specific reactive exercises after strength training with a tactical situation. ( film)
- Specific reactive exercises after strength training under fatigue conditions and tactical situations.
- Weightlifting exercises directed towards specific explosive movements.
- Acrobatic activities directed towards kick jumps. In order to achieve agility in combat. ( Film)
- Special endurance directed towards rhythm changes during the rounds.

- Special endurance under stress situations directed towards intensity training during short periods an against two or three opponents. (film)
- Simple reaction speed of the response to sound, visual or oral stimulation. ( film)
- Complex reaction speed of the response to a very tactical situation, upon sound, visual or oral stimulation.
- Special flexibility planning aimed to focus on the specific 95% of kicks.
- Strength flexibility aimed to specific face actions with ballast on the legs.
- Velocity reaction flexibility aimed to respond as fast as possible in specific situations like face kicks.

### **MENTAL TRAINING:**

- Technical visualisation exercises in order to visualise the technical performance.
- Tactical visualisation of tactical situations and how to solve them.
- Concentration and relaxation activities aimed to reduce stress competition.
- Stress control by the visualisation of specific championship situations in order to imagine stress situations and how to control them.

## **CONCLUSIONS:**

The most important aspects to point out in the Euro-Cup were:

- On the one hand an improvement of the hit strength in athletes with low weight, although they usually have a good reaction speed, their hit strength is lower. Even though the heavy weight competitors have a very good hit strength, we realised an important increase in reaction speed when the action was anticipated or even in direct reaction.
- It is also important to point out the increase of hit strength and reaction speed in the female team, so their hit strength and reaction speed are usually lower. In TKD the hit strength is very important in order to achieve the mark, otherwise the referees don't reach the mark.
- On the other hand it is worth mentioning the mental training because contact sports, to fight face to face is very stressful and also being an acyclic or situational sport the athlete has to achieve a high concentration in order to respond to the opponents action as fast as possible.
- The best results ever achieved by the Catalonian TKD team in any Euro-Cup (35 medals), can not only be explained by these integrated training methods. However, we should remark an improvement of explosive strength, tactical and reaction speed and hit strength, in addition to the increase of the athletes motivation and self-confidence.
- In spite of not having the results tested we focus on the athletes feelings and the direct observations during the training and championship.
- Nevertheless these results will be tested in the near future.