

Moscow 1980:



Doping Control



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The preparation and holding of the Olympic Games present their organisers with complex scientific and technical problems, the solution of which requires recourse to the modern achievements of science and technology...

Every four years, the IOC and the organisers of the Olympic Games try to perfect various aspects of this universal sports event, ranging from the conditions for lodging the athletes to the organisation of the medical service.

The IOC Medical Commission keeps a close watch on developments in modern science and tries to use its achievements in the organisation of the medical controls carried out on athletes as well as in the medical service provided at the Olympic Games.

If we study the development of medical control during the Olympic Games since 1968, we are able to see that obvious progress has been made in this service as regards the use of modern scientific equipment in laboratories as well as in the field of physico-chemical analysis methods.

Such progress makes it possible to reduce the time required for analyses and to provide genuine, consistent results.

Organisation of the service

The doping control committee which carried out all the work connected with the organisation of the medical control of athletes at the Games of the XXIInd Olympiad was set up by the Organising committee of Olympiad-80 in December 1977.

The committee was made up of eminent specialists from various research institutes in Moscow and Leningrad. Its main task was to

solve all the problems concerning the organisation of doping control and femininity tests during the last Olympiad.

During the first stage of its work, particular attention was paid to the structure of the service and to the recruitment of staff for the laboratory and doping control stations in the sports installations under construction, as well as to the scientific and technical equipment.

In 1979, the doping control committee directed its activities towards the creation of a new scientific and technological control system, the selection and training of staff, the publishing of a brochure entitled "IOC medical controls", and the organisation of doping control at the 7th summer Spartakiad of the peoples of the USSR, which offered an opportunity to "run in" all the component sections of the service.

In the final stage, after the doping control laboratory and control stations had been set up in the sports installations in Moscow, Leningrad, Minsk, Kiev and Tallinn, all the staff followed specially-programmed training courses.

Each specialist was given precise instructions which wholly conformed with the regulations of the Medical Commission of the IOC. Emphasis was put on the conduct to be followed in unexpected situations arising from contacts with athletes. We tried to create an atmosphere of goodwill and comfort, and to encourage close, friendly contacts with the competitors.

Our thorough work made it possible for us to avoid coming into conflict with the athletes, doctors and other national team officials during the celebration of the Olympiad.

31 control centres

A total of 31 control stations were set up in the Olympic installations of the 5 towns. 3 were of the first category, 23 were of the second category, 4 were temporary stations, and there was one veterinary control station for horses.

The premises of the permanent stations comprised 3 or 4 rooms, including a reception room, a room for the medical staff to work in, and toilets.

All the premises had special furnishings, the athletes could watch colour television or read newspapers. They had a choice of various drinks : mineral water, fruit juices, beer, tea.

The control stations were manned by 29 medical teams, each made up of 3-7 persons.

Samples were transported to the laboratory by special cars escorted by the radio-controlled motorised security service. The bags containing the samples were sealed, as were the cases containing technical documentation.

What then was different about the organisation of the doping control during the Games of the XXIInd Olympiad ? What new elements were introduced by the Organising committee and the Medical Commission of the IOC ?

We could quote a number of new basic provisions, including a new system of doping control during Olympic competitions which takes into account the experience of previous Games and the position of the International Federations on this subject.

According to this system :

- controls are not carried out until after competitions ;
- tests are carried out on all athletes arriving in first to third place in individual competitions ;
- rules for the controls to be carried out on athletes in individual competitions (the first 4 athletes and one other selected at random from the finalists) and in team events (1 athlete selected at random) are set out ;
- the 13 sports disciplines in which participants undergo anabolic steroids testing, i.e. Graeco-Roman wrestling, freestyle wrestling, judo, cycling, waterpolo, volleyball, rowing, canoeing, athletics, yachting, swimming, weightlifting and football, are listed.

We set up a system of notifying the athletes of each sports discipline who were to report for doping control, taking the finals and protocol ceremonies into consideration.

The selection of athletes for control was made by a representative of the doping control service and a technical delegate of the appropriate sports federation before the end of the final heats in the case of individual events and fifteen minutes before the end in the case of team events. These officials then drew up a report.

When the events were over and the results announced, a list was drawn up, on the basis of the report, of those athletes who were requested to undergo doping control. Officials of the Organising committee then gave them green cards requesting them to report to the control station.

The athletes were accompanied by officials. The doping controls were carried out in strict conformity-with the rules set out in the brochure entitled «*IOC medical controls* ».

Particular importance was put on the principle of the control system being independent at every stage, from the selection of athletes to the presentation of analysis results to the chairman of the Medical Commission of the IOC, Prince Alexandre de Mérode.

Athletes unable to produce a sample before 11 p.m. were taken by car, accompanied by an official, to the doping control station at the polyclinic in the Olympic village.

During the Olympic Games in Moscow, the polyclinic at the Olympic Village received 21 athletes.

This was the first time a mini-computer had been used in the management of the doping control system. Automatic data processing enabled us to check the samples taken as well as the work of the control stations. This system provided reliable and objective information on the work being carried out.

From the results of the activities of the doping control service during the Games of the XXIInd Olympiad it can be stated that the plan for dividing doping control into 5 groups classified by the Medical Commission of the IOC was carried out to the benefit of all the international sports federations. At the request of the athletics federations, 12 samples were also taken from athletes at the semi-final stage.

The extra samples taken in cycling were for tests to be carried out on athletes setting new world track records.

It should be stressed that for the first time in the history of doping controls at the Olympic Games, the regulations of the Medical Commission of the IOC and of the IFs were followed closely. This was evidence of the pre-



Meeting of the doping control committee of the Games of the XXIIInd Olympiad.

cise and thorough organisation of doping control at the Games in Moscow.

On 16th October 1976, the Executive Board of the IOC adopted a resolution according to which the doping control laboratory was to complete its work the day of the closing of the Games.

This meant that the time available for analysing each sample was quite considerably reduced. It should be noted that the choice of analysis methods, as well as of the equipment to be used, were clearly defined by the Medical Commission of the IOC.

These involved chromatography processes, radio-immunology and mass spectrometry. We therefore had to solve a complicated technical and scientific problem and set up a laboratory capable of carrying out each day the complete analysis of between 140 and 150 samples.

There were two solutions to this problem : we could have kept the system of analyses unchanged, which would have required a large number of staff and much laboratory equipment. The second solution allows for an improvement in methods and the use of electronic computers.

The first method is expensive and counter to technical progress. We therefore opted for the second solution, although we were fully aware that it would be much more complicated.

From 72 hours in 1976 down to 5 hours in 1980

It is almost impossible in a single article to give a full account of all the work carried out as part of the scientific programme of doping control. Nevertheless it is clear that during the last 3 to 4 years much rather complicated research has been undertaken on the experimental and methodological side.

We have reduced the time for anabolic steroids testing by using radioimmunology from 72 hours (Montreal, 1976) to 5 hours. During this same period we began to produce antisera and H^3 radioactive hormones in our own country.

The precision and reliability of the proposed method (anabolic steroid testing and radioimmunology) were checked and confirmed by joint research with British and Swedish scientists.

The use of a computer enabled us in this way to increase the precision and reliability of the results obtained and to reduce very considerably the time taken to process samples, which in turn enlarged the capacity of the laboratory.

Analysis methods using chromatography and mass spectrometry have also undergone major changes. In this field, particular attention was attached to increasing the precision and reliability of the methods used, and to the wide use of electronic computers for checking apparatus and handling results automatically.

These examples are proof that serious research had been undertaken in preparing the doping control laboratory for the Olympic Games, the aim of which was to perfect new physico-chemical analysis methods for the 5 groups of doping substances shown on the IOC Medical Commission's list.

The efficiency of this work was confirmed by the successful analysis of the control samples provided by the Medical Commission of the IOC on 12th July 1980.

During two days, the 10 doping substances provided were completely identified. The Medical Commission of the IOC studied the analysis results and was pleased to be able to confirm their high degree of precision and their reliability.

The success of this control enabled the Medical Commission of the IOC to open the laboratory and to entrust its staff with the analysis of the samples taken from athletes during the Moscow Olympiad.

On 15th July 1980, the chairman of the Medical Commission of the IOC, Prince Alexandre de Mérode, held a press conference and, among other items, announced to journalists that the control laboratory and the entire doping control service were completely ready.

It was characteristic of the laboratory's work during the Olympic Games that the samples did not arrive at regular intervals.

Generally, they arrived between 7 p.m. and 1 a.m., which meant that the staff had to work at night. Another factor was that the volume of work depended on the competition programme...

Statistics

The busiest day was 26th July, in the course of which the laboratory received more than 170 samples and carried out more than 1,000 analyses.

During the Olympic Games, 6,858 analyses were carried out by chromatography, 2,493 by radioimmunoassay, and 220 by mass spectrometry.

43 alcohol tests were also carried out.

In total, during the 15 working days, the laboratory carried out 9,340 analyses, which is more than at any previous Olympiad. This information is proof also of the intensity of the work carried out by the specialists during this period.

In drawing up his list of the work carried out by the doping control service, the chairman of the Medical Commission of the IOC, Prince

Alexandre de Mérode, stressed that the Olympic Games in Moscow had been the most « pure ». Proof of this is the fact that not one case of doping was registered.

Nevertheless, it should be noted that the laboratory had registered 6 positive results and traced the following doping substances : amphetamine (21st July), fluramine (23rd July), ephedrine (25th July), methandrostenolone (29th July), 19-nortestosterone and diethylpropion (31st July).

When these cases were reported to the Medical Commission of the IOC, it turned out that these samples belonged to its members and had been used to check the quality and reliability of the analyses carried out by the laboratory.

Femininity control

The femininity control laboratory was located at the polyclinic at the Olympic village.

1155 female athletes underwent the control, of which 995 received new certificates; the others had undergone the test in order to have previous certificates confirmed.

The Medical Commission of the IOC was assisted in its work by a Council made up of 5 well-known pharmacists who prepared materials for the doctors of the national teams. This Council met at the polyclinic in the Olympic Village and, under the direction of the members of the IOC Medical Commission, passed on information to the doctors of the national teams.

In concluding this summary of the special features of the organisation and activities of the doping control laboratory during the Games of the XXIInd Olympiad, we are able to state with satisfaction that all our work was organised in complete conformity with the regulations of the Medical Commission of the IOC.

At all times we followed rigorously the provisions of the Olympic Charter, respecting the noble principles of Olympism.

We hope that our experience in qualified and precise doping control carried out during the Olympiad in Moscow will be used in the future activities of the IOC Medical Commission and the medical commissions of the international sports federations.

V. R.

