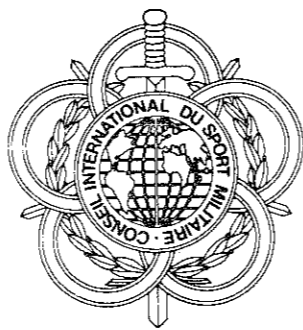


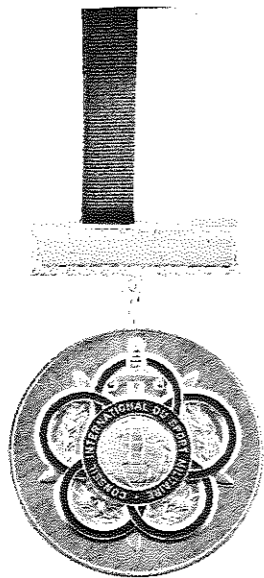
Sport

INTERNATIONAL





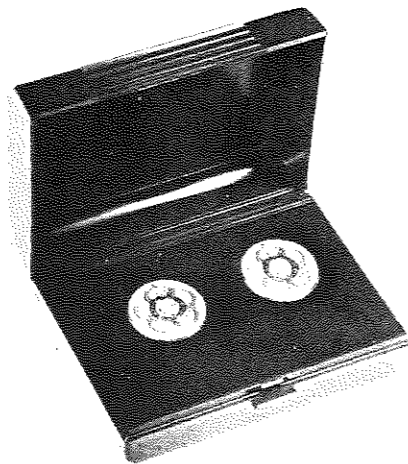
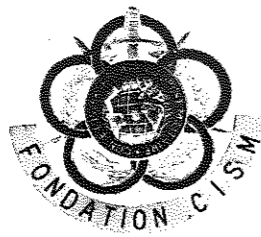
PRIVILEGED FIRM OF "C.I.S.M." SOLIDARITY FOUNDATION FOR WINNER MEDALS AND SOUVENIRS
 FIRME PRIVILEGEE DE LA "FONDATION SOLIDARITE C.I.S.M." POUR MEDAILLES VAINQUEURS ET SOUVENIRS



Winners medals
 Participants medals
 Commemorating medals
 Buttons
 Key-holders
 Cuff-links
 Gift Plates



Médailles vainqueurs
 Médailles participants
 Médailles commémoratives
 Porteclefs
 Boutons de manchettes
 Plaques cadeau
 Insignes




SPORT International

N° 67 / JAN 1986

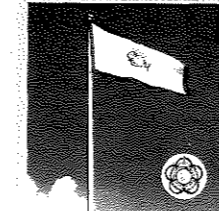
PUBLICATION OFFICIELLE
 DU CONSEIL INTERNATIONAL
 DU SPORT MILITAIRE
 OFFICIAL PUBLICATION
 OF THE INTERNATIONAL
 MILITARY SPORTS COUNCIL

Rédaction
 Abonnements - Subscription
 Publicité - Publicity
 Secrétariat Général du C.I.S.M.
 Avenue des Abeilles, 2
 B- 1050 Bruxelles
 Téléphone: 647.90.47
 Adresse Télégr.: CISMILITAIR —
 BRUXELLES
 Télex: FOCISM 24691
 Direction Générale:
 R. Mollet
 Rédacteur en chef:
 Dr. H. Vervaecke
 Traductions
 F. Baker
 Editeur
 Inter Sportverlag A.G.
 Reherstrasse 24 - CH-9016 St. Gallen

PRIX DE VENTE —
 SUBSCRIPTION RATES:
 Quatre numéros: 300 Francs Belges
 Four issues: 300 Belgian Francs
 Compte n° — Ac. Nr:
 611-4875620-82, CISM
 Banque de Commerce,
 Avenue des Arts, 51-52
 B-1040 Bruxelles — Belgique

IMPRESSION — PRINTING
 Imprimerie de la Barrière
 25, ch. d'Alseberg
 1060 Bruxelles

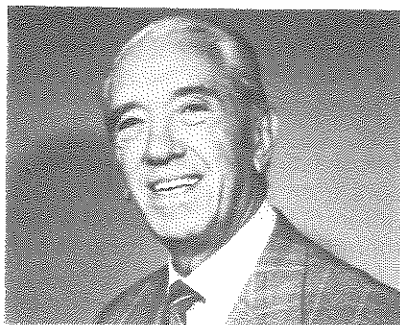
PAGE DE
 COUVERTURE
 FRONT COVER



Le drapeau du C.I.S.M.
 The C.I.S.M. flag

SOMMAIRE - CONTENTS

- 5** Le code de l'athlète
The athlete's code R. Mollet
- 8** Le sport: nouveau facteur de développement socio-économique
Sport: new factor of socio-economic development J.C. Van Havre
- 10** Aspects médicaux de la planche à voile
Medical factors related to wind-surfing J.C. Labadie
- 13** Physical training in altitude and in hot climates
Entraînement en altitude et en climats chauds L. Costa
- 17** Blood boosting: only a legal issue?
Transfusion sanguine: issue légale? A. Ryan
- 19** Headguard in amateur boxing
Le port du casque en boxe J. Falletta
- 20** Evaluation of boxers' performances through selected tests
Evaluation des performances du boxeur J. Fidzinski
- 23** Le stretching ou étirements musculaires
Stretching in sport J. Molinie
- 25** Life in CISM
La vie au CISM
- 36** Lu pour vous
Book review



le code de l'athlète the athlete's code

par R. MOLLET

Aux Jeux Olympiques d'été de Los Angeles, les observateurs de l'évolution du Mouvement olympique n'ont pu qu'être frappés par une constatation irréfutable: l'équipe de France de football composée exclusivement de joueurs sous contrat professionnel était devenue championne olympique. Une page était tournée.

Bientôt de nouvelles interrogations venaient s'ajouter à ce constat. Quelle serait la règle d'admission des joueurs de tennis dont le sport figure dorénavant au programme des Jeux d'été, prochainement à Séoul? Comment régler le cas des joueurs de hockey sur glace «professionnels»? Et celui des cavaliers de sauts d'obstacles dont tous les meilleurs se rencontrent à longueur d'année dans des concours de haut niveau, dotés de prix substantiels, pour éviter qu'aux Jeux Olympiques, certains d'entre eux soient écartés parce que «professionnels»?

A Mexico City en novembre 1984 le Mouvement olympique tint d'importantes assises. L'Assemblée des Comités nationaux olympiques sur base d'une importante et sérieuse réflexion rédigea la *Déclaration de Mexico* qui en son article 7 réclamait la révision d'urgence de la règle d'«éligibilité».

Il appartenait dès lors au Bureau de la Commission du Mouvement olympique d'inscrire à son ordre du jour l'étude de cette question qui concerne au plus haut point les athlètes, les fédérations et les comités olympiques. Encouragé par le président J.A. SAMARANCH, un lent cheminement des idées parsemé de réflexions approfondies aboutirent à la proposition dénommée par leurs auteurs (B. STANKOVIC, A. SIPERCO et R. MOLLET) *Code de l'athlète*.

Elle fut transmise par le président du C.I.O. à la *Commission d'admission* dont l'animateur est M. W. DAUME, président du C.N.O. de R.F.A., qui à la session de Berlin avait prononcé un discours remarqué sur les orientations nouvelles en matière d'admission.

La Commission des athlètes, présidée par M. TALLBERG, Finlande, et qui groupe des champions célèbres tels que Sebastian COE, Nadia COMANECI, Edwin MOSES, étudia également le projet du Code de l'athlète et fit à son propos de judicieuses remarques.

C'est dans ce climat constructif et résolument orienté vers l'avenir qu'à Lisbonne le 17 octobre 1985, en sa session annuelle, la Commission du Mouvement olympique admit les principes du Code de l'athlète et en décida l'étude extensive par tous les membres de la Famille olympique.

Le Code de l'athlète et les responsabilités

Les trois importantes entités qui constituent la base du

At the Summer Olympic Games in Los Angeles, observers of the development of the Olympic Movement must have been aware of the indisputable fact that the French team, which won the Football (Soccer) Championship title, was composed entirely of pros — professional, remunerated, players. This has heralded a new era in Olympics.

In its wake, more questions were raised. How will the eligibility rule be determined for tennis players wishing to compete in Seoul, as tennis has now been included in the Summer Olympics programme? What attitude to adopt for the ice hockey pros? Another topical case is that of a small percentage of top-level horseriders who compete regularly against each other in obstacle jumping events for high prize-money and are paradoxically barred from the Olympic Games arenas on the grounds that they are «professionals».

In November 1984, the Olympic Movement held an important meeting in Mexico City. On the basis of an in-depth survey, the Assembly of National Olympic Committees drafted the *Declaration of Mexico*.

Article 7 of the Declaration requests the urgent revision of the eligibility rule.

It therefore devolved upon the Steering Group of the Olympic Movement Commission to put on its agenda the study of this question which is of the highest concern of athletes, federations and Olympic committees alike.

With President Samaranch's support, a proposal was drafted after much deliberation which its authors (B. STANKOVIC, A. SIPERCO and R. MOLLET) have entitled *The Athlete's Code*.

The I.O.C. President then passed this draft over to the *Eligibility Commission* which is headed by Mr. W. DAUME, President of the N.O.C. of Germany, who delivered a distinguished speech at the Berlin session on the subject of the new orientations for eligibility.

The Athletes' Commission, presided over by Mr. TALLBERG (Finland), whose membership includes famous athletes such as Sebastian COE, Nadia COMANECI and Edwin MOSES, examined the draft Athlete's Code on which it made some pertinent comments.

It was in this constructive and forward-looking frame of mind that, at its annual session in Lisbon on 17th October, 1985, the Olympic Movement Commission adopted the principles of the Athlete's Code and advocated an extensive study be conducted by all the members of the Olympic Family.

The Athlete's Code and the Division of Responsibilities

The three main governing bodies — I.O.C., I.F.s and

Mouvement olympique, C.I.O., F.I., A.C.N.O., ont chacune des responsabilités et des finalités propres. Il convenait de les délimiter et les respecter. C'est pourquoi le Code de l'athlète assigne aux fédérations internationales la définition des critères d'admission de leurs ressortissants. La spécificité des fédérations est grande. A elles de déterminer les règles qui servent le mieux leur identité, leur développement, leur autorité.

Le C.I.O., de son côté, dit aux fédérations: «Voici une série de critères de base que vous devez impérativement inclure dans les règles d'admission applicables à vos athlètes».

Ils régissent un *Code de bonne conduite sportive*: respect du fair play, refus du dopage, acceptation de la tutelle fédérale, comportement en tous points irréprochable. Ces règles figureront dans la Charte Olympique révisée.

Les Comités nationaux olympiques enfin, demeurent les responsables de la sélection des athlètes olympiques. Leur jugement sera décisif, mais toutes les garanties d'objectivité et de justice devront être données à l'athlète.

Le Code de l'athlète suit les orientations du sport moderne

Les Jeux Olympiques et les grands événements sportifs, coupe du monde de football, tournois de tennis, championnats du monde d'athlétisme, font désormais partie intégrante des affaires.

Ces manifestations génèrent des ressources considérables. Il est logique que les acteurs en profitent. En effet, des dispositions simples et raisonnables ont été prévues dans le Code. L'hypocrisie qui a longtemps dominé et longtemps corrodé l'idéal sportif est désormais rejetée après avoir terni, hélas!, l'image des dirigeants sportifs. Une saine réaction s'est produite.

Les différences qui subsistaient entre l'est et l'ouest, entre le nord et le sud, ont provoqué la recherche d'une meilleure égalité de préparation et de participation de tous les athlètes du monde. Dans ce domaine, l'œuvre de la Solidarité olympique est d'ailleurs primordiale.

Le Code de l'athlète incorpore ces orientations. Il propose, en effet, que l'admission aux activités du Mouvement olympique, en particulier aux Jeux, dépende dorénavant de ce que l'on pourrait appeler un certificat de bonne conduite. C'est le respect de l'honneur, du fair play et le rejet des plaies du sport moderne que sont le dopage et la violence. Il s'agit véritablement d'un retour aux sources.

Le nouveau Code entend protéger réellement les valeurs éducatives et humanistes du sport. Les dangers actuels ne menacent pas uniquement le sport, mais la société toute entière.

Le Code de l'athlète et les pouvoirs sportifs

L'autorité des pouvoirs sportifs est garante d'une unité de pensée. Celle-ci s'affirme de plus en plus au sein de la Famille olympique comme le démontrent l'action considérable du président du C.I.O., la croissance de l'A.G.F.I.S., les dynamiques initiatives de l'A.C.N.O.

Le Code de l'athlète vise à restaurer pleinement l'autorité des organismes responsables de la gestion du sport

A.N.O.C. — which together form the basis of the Olympic Movement, each have their own respective responsibilities and objectives. It was deemed necessary that these be defined and respected.

This is why the Athlete's Code entrusts the International Federations with the task of defining the eligibility criteria as regards the members from their ranks.

The specificity of the different federations varies widely so it has been left to them to establish the rules in harmony with their identity, development and authority.

For its part the I.O.C.'s attitude towards the federations has been: «Here is a series of basic criteria which must be included in the eligibility rules applicable to your athletes».

They constitute a *good sports conduct Code* ensuring the deference of fair-play, the refusal of drug-taking, the acceptance of federal authority, in a nutshell the correct behaviour at all times. These rules are to appear in the Revised Olympic Charter.

Lastly, the National Olympic Committees bear the responsibility for the selection of Olympic athletes. Their decision is final but the athlete must be assured of their objectivity and justice in the process of selection.

The Athlete's Code is in keeping with Modern Sports Trends

The Olympic Games and the major sports events such as the World Football Cup, tennis tournaments, world athletics championships are today closely linked to the business world.

Considerable resources are being generated from these major sports events. It is thus logical that the actors should be offered a share of the takings. This need has been catered for in the Code which includes simple and reasonable arrangements for the athlete. The hypocrisy which hitherto dominated and corroded the Sports ideal, thus tarnishing the reputation of sports leaders, has now been rejected. A healthy reaction has been stimulated. The remaining differences between east and west, north and south, have prompted the search to achieve equal and improved preparation and participation opportunities for all athletes from all nations. In this respect the ongoing work of Olympic Solidarity is of paramount importance.

The Athlete's Code incorporates these new orientations. Indeed it advocates that eligibility to the activities of the Olympic Movement — with particular reference to the Games — should be based henceforth on what could be termed a *Certificate of good conduct*. This covers deference to honesty and fair-play and the rejection of the evils of modern sport, namely drug-abuse and violence. It is truly a reversal back to the original purity of sport.

The new Code sets out to protect the educational and human values of sport. Today's dangers not only threaten Sport they are a threat to Society as a whole.

The Athlete's Code and Sports Governing Bodies

The authority of Sports Governing Bodies is a guarantee of the consistency of intentions. This is being consolidated within the Olympic Family thanks to the far-reaching options of the I.O.C. President, the growth of G.A.I.S.F. and the dynamic initiatives of A.N.O.C.

et comme le dit excellemment Michel CLARE (l'« Equipe », 20 octobre 1985), il faut combattre l'influence des promoteurs quand elle est excessive et se fait en dehors des traditions du Mouvement sportif.

Les remous récents qui agitent le monde du tennis « professionnel » où promoteurs et agents se traînent en justice, l'un après l'autre, sont à cet égard tristement significatifs. Une forte réaction s'imposait donc.

En conclusion

Nous croyons sincèrement que le moment est venu, à trois ans de Séoul, d'agir vite afin que les athlètes arrivent aux Jeux certains que leurs qualités d'hommes intègres et conscients de leur exemplarité sont reconnues de tous car fièrement ils respectent leur Code.

CODE DE L'ATHLETE

Pour être admis à participer aux activités du Mouvement olympique et, en particulier aux Jeux Olympiques, un athlète doit observer et respecter la Charte Olympique ainsi que les règlements de sa Fédération Internationale (F.I.) dont il relève et sur lesquels le C.I.O. a marqué son accord.

Texte d'application

1. Chaque F.I. est responsable de fixer les critères d'admission propres à son sport en conformité avec la Charte Olympique. Ces critères doivent être approuvés par le C.I.O.
2. Tous les athlètes qui participent aux Jeux Olympiques doivent être membres de la Fédération nationale régissant leur sport et, en conséquence, de la F.I. concernée.
3. Les Comités nationaux olympiques (C.N.O.) sont responsables de l'application, par les Fédérations nationales, des critères fixés par les F.I. Ils veilleront en particulier à l'application des prescriptions générales prévues par le C.I.O.
4. Tous les athlètes qui participent aux activités du Mouvement olympique doivent:
 - (i) se conduire sur le terrain de sport d'une manière exemplaire, en respectant l'esprit de fair play et de non-violence
 - (ii) refuser de faire usage des produits et procédés défendus par les règlements du C.I.O. et de la F.I.
 - (iii) accepter de se soumettre loyalement en tout temps aux contrôles et examens médicaux effectués conformément aux règlements de la Commission médicale du C.I.O.
5. Aux Jeux Olympiques, les récompenses financières ne sont pas permises.
6. Les athlètes ne doivent pas permettre que leur personne, leur nom, leur portrait ou leurs performances sportives soient exploités à des fins publicitaires, sauf engagement préalable de leur F.I., de leur C.N.O. ou de leur Fédération nationale. Tous les paiements doivent être effectués à la F.I., au C.N.O. ou à la Fédération nationale intéressée, et non à l'athlète.
7. Lors des Jeux Olympiques, aucune marque publicitaire sauf la marque de fabrique des vêtements ou équipements telle qu'autorisée par le C.I.O. ne peut être admise.

Note: Le texte ci-dessus pourra être amendé après la large consultation entreprise au sein du mouvement olympique.

The Athlete's Code endeavours to re-establish the authority of the Bodies responsible for the management of sport and, as Michel CLARE in «L'Equipe» on 20th October, 1985, explained so correctly, we must guard against any excessive influence by sponsors which in keeping with the traditions of the Sports Movement. The recent wave of legal actions in «professional» tennis circles between sponsors and agents had sadly highlighted this danger. Strong remedial action must therefore be taken.

Conclusion

We firmly believe that the time has come to take action now, three years before Seoul, to ensure that the athletes go to the next Games confident of the due recognition by all of their honesty and exemplarity because with pride they uphold their code.

ATHLETE'S CODE

In order to be eligible to participate in the activities of the Olympic Movement, and in the Olympic Games in particular, an athlete must observe and respect the Olympic Charter as well as the rules of the International Federation (I.F.) under the authority of which he comes, and which have been approved by the I.O.C.

By-law

1. Each I.F. is responsible for establishing its sport's eligibility criteria, in accordance with the Olympic Charter. These criteria must be approved by the I.O.C.
2. All athletes who participate in the activities of the Olympic Movement must be members of the National Federation (N.F.) governing their sport, and therefore of the relevant I.F.
3. The responsibility for ensuring the observance of the I.F.s' eligibility criteria lies with the I.F.s themselves and, by way of the N.F. of each sport, with the N.O.C.s.
4. All athletes who participate in the activities of the Olympic Movement must:
 - (i) respect the spirit of fair-play and non-violence, and behave accordingly on the sports-field;
 - (ii) refuse to use the products or follow the procedures prohibited by the rules of the I.O.C. and of the I.F., and accept at all times to undergo the medical controls and tests carried out in accordance with the rules of the I.O.C. Medical Commission.
5. All athletes who participate in the activities of the Olympic Movement must not allow their person, name, picture or sports performance to be used for advertising, without the prior agreement of their I.F., N.O.C. or N.F. All payments must be made to the I.F., N.O.C., or N.F. concerned, and not directly to the athlete.
6. No form of financial reward whatsoever is permitted at the Olympic Games.
7. No item of advertising other than trademarks on clothing or equipment as authorized by the I.O.C. is permitted at the Olympic Games.

Note: The above text may be modified depending on the findings of the wide-spread consultation within the Olympic Movement.

le sport:
nouveau facteur de
développement
socio-économique

sport:
new factor of
socio-economy development

par Jean-Claude VAN HAVRE



Le sport: nouveau catalyseur de développement

Parmi les nombreux facteurs traditionnellement cités dans l'arsenal des leviers et des outils de développement, on ne cite que rarement la pratique du sport.

Il convient de déplorer ce fait, car on méconnaît ainsi un facteur de développement aussi intéressant qu'efficace. En effet, les freins au développement sont, soit d'ordre économique (insuffisance et mauvaise utilisation des ressources), soit d'ordre socio-politique (structures inadéquates), soit encore d'ordre éducatif.

C'est vraisemblablement sur ce dernier plan que l'on trouve les principaux freins au développement.

Il s'agira en effet, non seulement du niveau insuffisant de l'enseignement général ou technique, mais surtout des « mentalités », c'est-à-dire d'un ensemble de références socio-culturelles qui guident, orientent ou limitent le mode de vie des individus comme des communautés.

Négliger ce facteur équivaut à réduire considérablement l'efficacité comme la portée des autres moyens de développement mis en œuvre, y compris au niveau de l'enseignement traditionnel.

Or, on constate que développer la pratique du sport à une échelle importante constitue l'un des moyens les plus puissants pour faire évoluer rapidement les mentalités. C'est dans ce sens qu'on peut affirmer que le sport constitue un facteur de modernisation qui mérite une attention toute particulière.

La transition d'une société peu développée, voire simplement traditionnelle, vers le stade d'une société de développement industriel ou agricole, est à la fois difficile et périlleuse.

Difficile car cette transition se heurte à un grand nombre de blocages liés aux « mentalités » ambiantes. Périlleuse car elle est déstabilisante, elle perturbe profondément le cadre traditionnel de références socio-culturelles et peut être à l'origine de ruptures et par voie de conséquence, de désordres socio-politiques.

C'est à ce niveau qu'apparaît la valeur éducative de la pratique du sport.

L'analyse du phénomène révèle en effet que, sous réserve

du respect d'un certain nombre de conditions, la pratique du sport favorise de façon précise, le processus de modernisation par sa valeur éducative.

Elle développe en effet dès l'enfance un certain nombre de qualités indispensables pour la mise en route du processus de modernisation notamment :

- L'esprit de compétition.
- La valeur de l'effort, individuel ou collectif, comme moyen d'atteindre un objectif à court et à long terme.
- La valeur du travail en équipe, la coordination des efforts, la synergie d'un groupe structuré.
- La valeur de la formation, de l'entraînement.
- La discipline et la camaraderie qui sont autant de facteurs de cohésion sociale, etc.

Par ailleurs, la pratique du sport apporte une signification aussi pratique que rapidement assimilable, à la notion même de progrès, de promotion individuelle ou collective.

En outre, le sport est l'un des moyens les plus efficaces pour promouvoir des échanges régionaux, nationaux, voire internationaux.

Or, il est admis que ces échanges constituent un facteur éducatif indispensable.

La pratique du sport est un moyen de décroisement efficace. Elle offre aux individus et aux groupements une issue réelle, tangible, dans des situations souvent sans issue apparente, voire désespérée.

Elle offre aux individus la possibilité de réaliser une percée dans une forme spécifique de développement, car la compétition internationale leur permet de se hisser de suite à un stade d'intégration dans le « monde moderne ». Il convient de souligner à ce niveau, combien l'action d'organismes tels que les Comités Olympiques nationaux, le Comité Olympique International, les Fédérations Internationales et le Conseil International du Sport Militaire (C.I.S.M.) jouent un rôle aussi déterminant que vital dans tout ce vaste processus de promotion individuelle et collective.

Le sport prépare non seulement à la modernisation, il projette l'individu, subjectivement et objectivement, dans le monde moderne.

Les succès obtenus par des athlètes individuels ou par des équipes dans les compétitions internationales, ont un effet considérable sur la prise de conscience nationale.

Le sport contribue à rompre l'isolement de nombreux pays en voie de développement par rapport aux pays industrialisés et il rétablit une forme de compétition sur des bases plus égales.

D'autres aspects du sport méritent d'être pris en considération en tant que facteurs de développement, notamment son effet stabilisateur dans les grandes agglomérations urbaines marquées par un niveau élevé de tensions et de violence dans des régions caractérisées par des tensions politico-culturelles, ou encore comme moyen indispensable d'expression et comme exutoire dans des régions où l'encadrement politico-culturel, voire religieux, n'autorise aucune autre forme d'expression.

On peut admettre pour l'ensemble des raisons évoquées ci-avant que le sport constitue un puissant catalyseur de progrès.

Un investissement dans le secteur du sport provoque, sous certaines conditions, à valeur égale d'investissement, un effet global induit supérieur à celui de nombreux investissements industriels, voire agricoles.

Cette constatation se vérifiera d'autant plus que l'investissement sera surtout constitué par du transfert de know-how et, d'autre part, au niveau des investissements locaux, il sera centré autant que possible sur l'utilisation de matériaux et de produits locaux.

Les conditions qu'il y aura lieu de respecter pour que la pratique du sport apporte les effets souhaités seront entre autres:

- la promotion des sports populaires sur une large échelle dans le cadre d'une politique coordonnée.
- la multiplication d'infrastructures légères, mais de con-

ception avancée et spécialisée, telles que par exemple:

- les modules urbains de sports,
- les modules et centres ruraux de sport,...
- la formation d'un encadrement adéquat,...

Les effets induits par le sport dans le processus de développement sont nombreux et leurs interactions sont multiples.

On note en effet que la pratique du sport développe ses effets simultanément à plusieurs niveaux, qui peuvent chacun être considérés comme des paramètres importants du processus de développement, à savoir:

- L'aptitude et la préparation mentale au développement.
- La prise en conscience nationale ou régionale.
- La cohésion nationale ou régionale.
- La stabilité socio-politique.

Dans ce sens la pratique du sport présente un caractère unique et nouveau dans l'arsenal des techniques de développement socio-économique.

Il semble en conséquence indispensable que la pratique du sport soit dorénavant sérieusement prise en considération dans le sens décrit ci-avant, à la fois par les gouvernements des pays en développement et par les nombreux organismes, privés ou publics, nationaux ou internationaux, dont l'activité est centrée sur l'aide au développement.

Il semble cependant indispensable préalablement à toute action-d'envergure dans le domaine, de procéder à l'étude scientifique du phénomène, de ses divers aspects et de leurs interactions.

SUMMARY

In his article, Jean-Claude van Havre explains how he sees sports as a new factor in socio-economic development.

He feels that sport today is not sufficiently recognised as being one of the key development factors.

Regular sports activities facilitate a more rapid change in mentality and adjustment to the modern life-style and thus play an important role as a modernising factor.

Sport has an educational value. Indeed it develops certain qualities such as:

- the competitive spirit as a means of reaching goals in the short and long term;
- the value of team work;
- the value of formation and training;
- discipline and friendship.

Furthermore, organising sports activities is one of the most efficient ways of promoting regional, national and

international exchanges. Sport brings people together. The large sports governing bodies (I.O.C., International Federations, and N.O.C.s) play a valuable and vital role in promoting sport.

Success in sport can actually improve the spirit of a nation.

The population benefits directly from investments in the sports sector.

In particular, Mr. van Havre advocates:

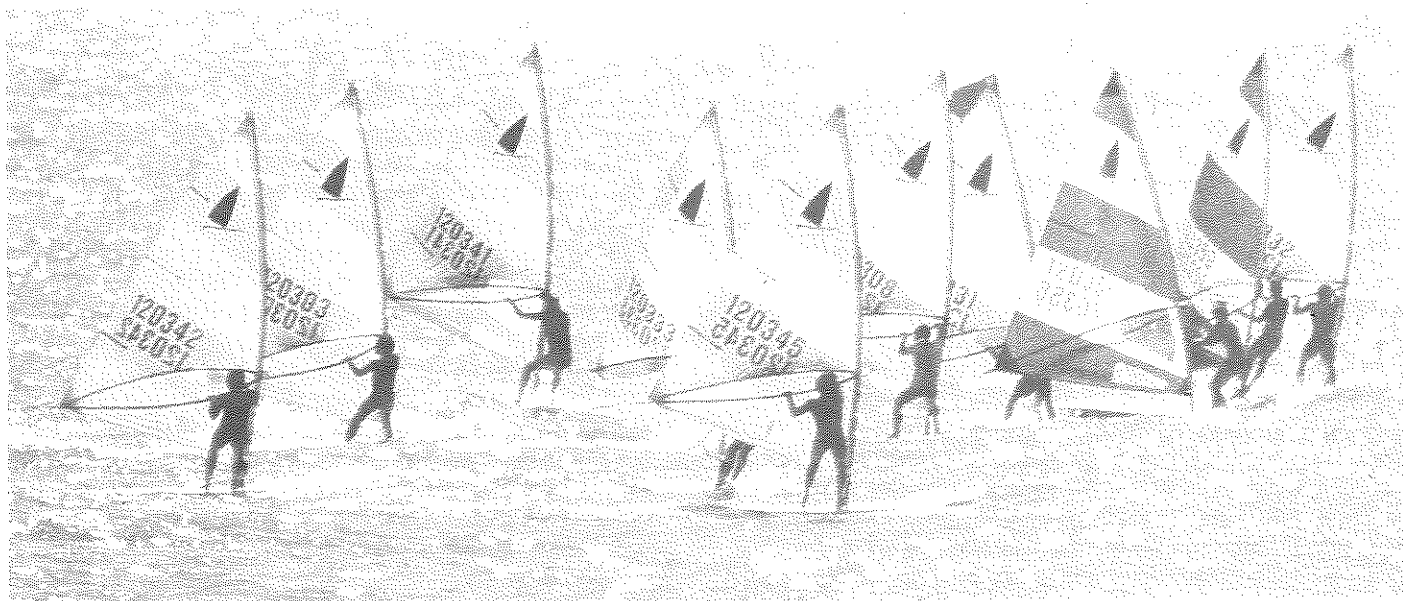
- the large-scale promotion of popular sports;
- the intensification of modular sports hall constructions;
- the formation of more sports leaders.

Sport can improve national and regional unity; it is a factor of socio-political stability. In particular an effort should be made by governments and sports bodies to ensure a better development of sport in the third world, taking into account the need for each project envisaged to be analysed scientifically.

aspects médicaux de la planche à voile

medical factors related to wind-surfing

par le Médecin J.C. LABADIE



RESUME

Au cours de cette étude sur la pratique de la planche à voile, nous avons analysé les efforts musculaires mis en jeu, les conditions physiques requises et les accidents auxquels son usage peut donner lieu. Du fait de la pratique très récente de ce sport, il est encore difficile de lui attribuer une pathologie spécifique, cependant une première approche peut être faite:

- l'effort musculaire, essentiellement statique, peut être très intense, éprouvant en particulier les membres supérieurs;
- d'après notre enquête portant sur 258 sujets, les courbatures et les algies vertébrales tiennent la première place;
- les lumbagos durables ou récidivants, véritables technopathies paraissent être les accidents les plus spécifiques de ce sport;
- les fractures sont rares et peu graves. Les contusions et plaies superficielles sont fréquentes mais peu importantes;
- il paraît intéressant de noter que les algies vertébrales préexistantes ont tendance à céder du fait de la pratique de la planche à voile, élément à prendre en considération chez les adultes.

Dans l'ensemble la planche à voile représente la pratique d'une activité physique et sportive de pleine nature abordable à presque tous les âges et dont le retentissement sur la santé paraît infiniment bénéfique avec une pathologie mineure et peu spécifique du moins dans l'immédiat et dans les conditions normales d'utilisation.

SUMMARY

This survey set out to analyse the muscular efforts engaged by wind-surfers as well as the physical conditions required and the type of accidents encountered in this sports discipline. As this sport was introduced quite recently, it is rather premature to determine a specific pathology pattern associated with its adepts; however, an initial assessment has recognised that:

- the essentially muscular effort can produce intense pain in the upper limbs;
- this survey, conducted on 258 wind-surfers showed that aches and spinal algia were prevalent complaints;
- durable or recurring lumbagos and genuine technopathies appear to be the specific injuries encountered;
- fractures are rare and minor. Bruises and superficial wounds are frequent but not very serious;
- it is interesting to note that pre-existing spinal algias tend to give way during wind-surfing, so this is a factor to be considered by adults.

Overall, wind-surfing constitutes an outdoor physical activity accessible for all age-groups and is considered to have mostly beneficial effects on health with a minor and unspecific pathology in the short-term under normal conditions.

Dernier venu dans le domaine de la navigation à voile, la planche à voile (P.A.V.) a désormais conquis ses lettres de noblesse sur le plan sportif puisqu'elle vient d'entrer par la grande porte aux Jeux Olympiques dans la mesure où une épreuve lui sera réservée en 1984. De ce fait, et parce que par ailleurs cette activité nautique connaît un développement tout à fait extraordinaire, les médecins du sport se doivent de s'intéresser à elle et l'on doit s'attacher à mieux connaître les exigences de sa pratique ainsi que les conséquences qui peuvent en résulter. Quelques travaux récents (thèses, mémoires) abordent déjà le sujet mais il est clair que plusieurs années seront nécessaires avant que le phénomène soit mieux saisi.

D'autre part il faut d'emblée distinguer deux aspects essentiels de la pratique de la P.A.V. :

- l'usage banal, ludique, estival et commun de la P.A.V. tel que chacun de nous le connaît plus ou moins;
- la pratique au plus haut niveau avec tout ce que cela sous-entend de difficultés et de sollicitations de l'organisme.

Plus que toute autre activité nautique il nous apparaît que la P.A.V. au plus haut niveau nécessitera la présence de champions confirmés, entraînés, endurcis, non seulement excellents techniciens et tacticiens, mais aussi super athlètes supérieurement préparés sur le plan physique.

Dans l'immédiat nous voulons simplement esquisser un tableau général de la pratique de la planche à voile vu par un médecin à partir de sa propre expérience et de celle exposée par quelques auteurs récemment. Pour plus de commodité, nous exposerons d'abord les problèmes rencontrés par le débutant puis par le pratiquant confirmé, enfin nous passerons rapidement en revue certains aspects communs à tous, de la pratique de la P.A.V.

1. Le débutant en P.A.V.

Nous ne dirons rien de la technique de la P.A.V. que d'autres connaissent beaucoup mieux que nous-mêmes. Remarquons cependant au passage que si l'apprentissage est, somme toute, assez rapide (10 heures en moyenne dans notre enquête en Aquitaine), il s'avère parfois extrêmement laborieux et peut représenter une situation à risque non négligeable.

Sur 258 pratiquants interrogés, 86% ont été au moins une fois en difficulté lors de leur initiation :

- 71% par insuffisance technique,
- 45% par épuisement,
- 5% par bris de matériel.

L'insuffisance technique débouche d'autant plus vite sur l'épuisement que la météorologie aura été mal appréciée (force du vent, courant, variation subite de l'un à l'autre, etc.).

D'autre part la P.A.V. pour un débutant représente une activité où la dépense énergétique est très importante. La force musculaire nécessaire pour relever le gréement, l'extrême fréquence des chutes et donc des remontées sur

la planche, la déperdition énergétique par conduction thermique sont autant d'éléments qui peuvent amener rapidement à l'épuisement le planchiste débutant.

A côté de l'épuisement, finalement banal dans l'apprentissage d'un sport, mais pouvant être lourd de conséquences dès qu'il s'agit d'un sport nautique, il faut noter chez le débutant l'existence de courbatures en grand nombre.

Le plus souvent localisées au niveau de la ceinture scapulaire et des membres antérieurs, ces courbatures atteignent largement la région dorso-lombaire, conséquence de la mauvaise technique du débutant dans le relevage du gréement. Son manque d'équilibre initial le contraint à utiliser préférentiellement ses muscles dorso-lombaires à la place des muscles du train inférieur.

Dans notre enquête 51% des pratiquants ont présentés un épisode algique de l'axe rachidien à la suite de la pratique de la P.A.V. Ce pourcentage s'élève à 68% chez ceux qui ont des antécédents rachidiens avant toute pratique, contre 42% seulement pour ceux qui n'ont jamais eu d'ennuis rachidiens préalables à la pratique de la P.A.V.

Dans 80% des cas c'est la région lombaire qui est concernée.

Il s'agit, en général, d'algies banales disparaissant en 2 jours. Cependant dans 35% des cas nous avons noté une persistance au-delà de 2 jours et dans 10% environ l'existence de blo-

cages vertébraux traduisant une atteinte disco-ligamentaire.

Les crampes sont fréquemment retrouvées lors de la pratique de la P.A.V., moins toutefois chez le débutant que chez le pratiquant de bon niveau. Elles siègent dans 70% des cas au niveau des membres supérieurs et constituent un facteur limitant de la pratique. En effet, l'apparition de ces crampes entraîne un arrêt momentané et cela peut, dans certaines circonstances, être à l'origine d'une situation à risque. Enfin les accidents traumatiques surviennent aussi bien chez les débutants que chez les planchistes confirmés encore que certains accidents soient plus spécifiques du débutant. C'est le cas, en particulier, des traumatismes liés aux chutes, provoquant des contusions multiples, au niveau des membres inférieurs surtout.

2. Le pratiquant confirmé

Dans la mesure où il domine bien la technique de la P.A.V., les problèmes auxquels il se trouve confronté sont moins nombreux, toutefois il faut noter :

- les algies rachidiennes : fréquentes et importantes chez le débutant, on les retrouve également chez le planchiste confirmé; toutefois on remarquera que dans notre enquête 44% des pratiquants ayant des antécédents d'algies rachidiennes ont constaté une amélioration de leur état du fait de la pratique de la planche à voile et une fois la période d'initiation terminée;
- les crampes musculaires : fréquentes au niveau des membres supérieurs, elles constituent souvent un facteur limitant de la performance, en particulier lors des épreuves de longue durée par fort vent; vraisemblablement d'origine vasculaire, leur prévention apparaît très difficile et il s'agit là d'un problème non encore résolu à notre connaissance;
- la pathologie traumatique est banale pour l'instant et touche beaucoup plus les membres inférieurs (44%) que les membres supérieurs (12%), elle est dominée surtout par les contusions et les plaies mais nous avons noté 5 entorses du genou dont 4 sur genou fragilisé, 6 entorses tibio-tarsiennes, 3 entorses d'orteils, 2 fractures phalangiennes aux pieds ainsi que 6 épaules douloureuses sur 258 sujets interrogés.

3. Pathologie commune

L'érythème solaire est un risque surtout par petit temps et en l'absence de

vêtement de protection; le pratiquant confirmé, moins sensible aux chutes, y sera plus exposé que le débutant. Le mal de mer ne semble pas exister en planche à voile vraisemblablement à cause de la participation physique intense demandée au planchiste. Tant sur le plan strictement physiologique que sur le plan psychologique, il existe de bonnes raisons de penser que cette naupathie épargne préférentiellement le véliplanchiste.

Sur le plan diététique il convient de considérer qu'en dehors de la compétition qui exige toujours une diététique équilibrée et harmonieusement répartie dans le temps, la pratique ludique de la P.A.V. entraîne la plus grande liberté dans ce domaine. Toutes les erreurs dans ce domaine trouveront toujours la même sanction, d'autant plus que l'effort physique important nécessaire pour la pratique de la P.A.V. viendra directement en compétition avec le travail nécessaire à la digestion par exemple.

4. Contre-indications à la pratique de la P.A.V.

En dehors des contre-indications définitives ou temporaires propres à la pratique de tous les sports, on retiendra plus volontiers les indications suivantes :

- les risques liés au milieu aquatique et à une ambiance froide : la comitialité, l'asthme, les affections cryoglobulinémiques, les urticaires au froid, les maladies de Raynaud, les acrocyanoses importantes,
- les risques liés au rayonnement solaire tels que pellagre, urticaire solaire, herpès solaire, porphyrie congénitale,
- les risques liés au frottement et aux contractions des mains sur le wish-bon telles que épidermolyse bulleuse congénitale, maladie de Dupuytren,
- les risques liés à des accidents aigus pouvant être aggravés du fait de la chute en milieu aquatique tels que : affections neurologiques, cardio-vasculaires, endocriniennes, métaboliques.

De plus, l'indication chez l'enfant devra être discutée en fonction du type de matériel utilisé (adulte ou enfant) et du type de compétition effectuée (de faible durée ou de longue durée).

Un âge minimum de 11 à 12 ans suivant les gabarits paraît une limite raisonnable pour une pratique modérée. A l'opposé, il semble difficile de fixer une limite d'âge supérieure. Elle dépendra surtout de la condition physique, de l'intégrité de l'appareil locomoteur, de la situation cardio-vasculaire et respiratoire. Le vieillissement diminue la tolérance corporelle aux variations de température; il faudra en tenir compte.

Conclusion

En conclusion et dans l'état actuel des constatations effectuées par les pratiquants et les médecins du sport, on peut dire que la P.A.V. représente la pratique d'une activité physique et sportive de pleine nature abordable à presque tous les âges et dont le retentissement sur la santé de l'individu apparaît comme très bénéfique.

En effet, les incidents et accidents que l'on peut lui imputer sont peu nombreux et de moindre gravité. En dehors des contre-indications générales à la pratique de tous sports, il y a assez peu de contre-indications spécifiques.

Toutefois il conviendra de suivre de très près la pratique au plus haut niveau de la P.A.V. afin de prendre en considération un aspect nouveau pour lequel nous manquons encore du recul suffisant.

Bibliographie

1. BARROUX (D.). - La planche à voile. Enquête médicale en Aquitaine. Thèse Méd., Bordeaux, 1979, n° 268.
2. BROUILLET (P.). - Aptitude physique. Adaptation physiologique et traumatisme dans la pratique des sports nautiques de voile. Thèse Méd., Marseille, 1977, n° 448.
3. JUSTAFRE (Th.). - Aspect de la pathologie locomotrice consécutive à la pratique du dériveur léger et du windsurfing. Thèse Méd., 1977, n° 92.
4. LACOMBE (B.). - Surf à voile : pédagogie, enseignement individuel et collectif, sécurité. *Rev. Educat. Phys. et Sport*, 1977, n° 146, 43-45.
5. ROUVIER (J.N.). - Aspects médico-sportifs de la pratique de la planche à voile. Mémoire C.E.S. de biologie et médecine du sport, Angers, 1980.
6. SUPERVIE-MAUPAS (B.). - Le surf-riding : aspects médico-physiologiques. Thèse Méd., Bordeaux, 1977, n° 31.
7. ZUCCARELLI (J.). - La planche à voile, technique et pratique. De Vecchi édit., 1978, 199.

“physical training in altitude and in hot climates”

entraînement en altitude et en climats chauds

by Lamartine P. COSTA

The feasibility of a method of physical training, which considers the altitude as a stressing factor for the development of resistance and endurance, is perfectly accepted in view of the data discussed. Therefore, we may formalize this process of work – Altitude Training – with a basis on the experiments accomplished and with the following functional organization:

(1) In principle, in this method, the altitude will act as a “load” of any given exercise. As is known, the yield obtained by the application of different loads will reside in the direct reason of the dosage: if this is applied gradually, it will be assimilated, and if it is excessive, a condition of inhibition of protection will be present. At the same time as this process, another task of counter-resistance will be carried out, in which the stressing agent will be the climbing effort. In this way, specific functional adaptations are to be expected in regard to the resistance offered by the altitude and by the difficulty of progress on unlevelled ground, and not modifications of a physiological nature, commonly observed in the phenomenon of acclimatization.

(2) Basically, the utilization of altitude for this type of physical preparation does not restrict itself to training at altitude, but consists in the passage from one level to another, in a such a way as to attain a progressive decline in the partial oxygen pressure.

If an athlete makes an effort at a certain altitude, or in an amplitude of reduced variation, the organism will have a tendency to acclimatization to that level and the stressing factor will disappear after some period of time. In addition, the transfer of the athlete alone to a high place (above 1,500 meters) will create an initial condition of protection, of variable duration and individual action, which will prevent for some time a maximum yield in so far as the “quantity of work” factor is concerned. Although the physiological adaptations resulting from acclimatization in this new place of training will originate an improved performance in lower levels, the advantage will be of transitory nature and will disappear after some days.

(3) The functional amplitude of differences of level for the obtention of a stressing factor decreases with the altitude, since the capacity of work is inversely proportional to height. According to observations discussed, and in consonance with the requirements in so far as quantity of work in training is concerned, the largest yield should be that which is produced by effort carried out between 20 to 40 kilometers between the two points, considering climbing

and descending. To this aspect, one may add the detail of individual reactions of each person, both caused by the altitude effects, as well as by the distance covered. Another scheme of work for individuals resident in places at high altitude, would consist in climbing the programmed distance in a more reduced amplitude of variation of levels: thus, for example, an athlete who lives at 1500 meters, would climb up to 2000 meters through a less steep route. In any way, only a practical experience at the location chosen will determine this amplitude, especially above 2000 meters, with consideration of a known and marked reaction of individuals to altitude.

(4) In view of its features, Altitude Training is a mixed method of work, since the use of altitude only develops Resistance and Endurance. Speed, Strength, Coordination – Rhythm for the specific case of the long distance races and short distance races – and Resistance envisaged separately, should be developed through the usual procedures of work: repetitions of running at short distances and high speed, exercises with weights or isometrical contractions and time-controlled repetitions of sub-maximum intensity in medium distances.

(5) The loads of altitude should be individually applied according to the athlete's capacity and to the level from which the climbing effort will be initiated. The number of loads in a program of work depends upon the degree of the development of Resistance and Endurance with relation to other qualities that are being envisaged with the training. This dosage will essentially depend upon the evaluation of the trainer to maintain the balance of the points envisaged. It was noticed in various occasions that the excessive number of loads produces a considerable reduction in Speed, although the frequency of three times per week, in a group of athletes who accomplished a joint work, did not bring any remarkable consequence. The best system apparently consists in alternating the altitude loads with the intensity loads in the running, completing it with counter-resistance loads (weight). An example of a weekly basic program for a confirmed athlete who sustains a load of 1500 meters altitude and a total distance of 160 kilometers per week, could be:

- Monday: 20 km climb and 20 descent: departing from 500 meters and arriving at 1500 meters altitude.
- Tuesday: 30 to 40x200 meters, in athletic track, at 28-30 sec, with maximum active interval of 90 sec, covering 200 meters; or 15 to 20x400 meters at 60-70 sec, with maximum active interval of 2 min, covering 200 meters; exercises with weights.

- Wednesday: 8 to 10x100 meters at 85-90% of the best time in distance, with maximum interval of 3 min.
- Thursday: same as Monday.
- Friday: same as Tuesday.
- Saturday: same as Monday.
- Sunday: same as Wednesday.

To reach this stage, graduation also depends on the individual capability, and should be carried out by means of the increase of repetitions of short and average distances for the work on athletic tracks. For altitude, gradualism refers itself to the intensity of the effort of climbing: departing from the alternated march with small races and attempting always to improve the earlier performance (time) in the subsequent training. For the quantity of total work, the distance of 160 km was established as a guide, since empirical experience refers to it in considerable degree: the limit in the numbers of kilometers is of individual nature and may be situated above or below this value. Only observation of the athlete during a long time will show his real capability.

Climb should be made by alternating the speed: faster in straight areas and more reduced in the curve. For the descent, this directive becomes of special importance. The experiments made show that different athletes experienced, during various days, acute pain in the knees after the mountain training: the elimination of the descending route, or the control of the speed in the descent, ceases these effects.

(6) Altitude Training is a method which develops itself in a high degree of capability of sufferance of the athlete, making him confident and capable for competition. One observes, however, that the trainer should not request the maximum effort from the athlete during the initial stages, considering the strength of the stimulants (altitude and the climbing effort), which may cause a condition of strain within a short period time. Joint training, on the other hand, is the best indicated: one registered a decline in the production of certain athletes who were working separately; on the other hand, work accomplished under the form of competition exhausts the athletes, reducing the production of the subsequent day. A process, which has shown its efficiency in collective work, consists in organizing an individual departure, with 30 to 60 sec of interval, and have each athlete control his own performance.

(7) Altitude Training may represent an efficient solution for tropical and sub-tropical areas, where there are mountains, and where one desires to raise the level of possibilities in relation to Resistance and to Endurance. In the specific case of Brazil, this feasibility is exceptional: the coastal area is marked by irregular terrain and penetrates into the interior in the area of largest development and concentration of population (RIO DE JANEIRO, MINAS GERAIS, SAO PAULO, SANTA CATARINA and PARANÁ). In addition to the permanent temperature microclimates encountered in this area, and which may serve as a basic level for the training of exceptional athletes, one encounters places adequate within or close to the large cities for the organization of training larger groups.

The selection for appropriate sites for the hot and humid areas in a general way, needs to be done by means of a geo-sportive survey, whose main points to be taken into consideration are as follows:

Temperature: in a general way, the decrease of temperature with altitude corresponds to 1 °C per 150 to 200 meters of height. According to Delgado, in Brazil this gradient is situated between 0,53 and 0,58 centigrades

per each 100 meters. These values are larger in the winter – contrary to temperate regions – which should thus be programmed as the basic period of time for the annual training calendar.

Humidity: the absolute value of humidity contained in the air also decreases with altitude, stressing the intrinsic features of certain sites. The proportionality of the decline may be evaluated by a certain area, according to Piery, in accordance with the following percentages:

0 m	= 100%
1000 m	= 70%
2000 m	= 49%
3000 m	= 35%
4000 m	= 24%

This detail is highly important for the yield of the work, and it is known that the gradual reduction of the absolute humidity of the air will be linked to the equivalent behaviour of the temperature, adding the effects and creating more favorable conditions progressively when the altitude is overcome.

Pollution of the air: the content of impurities in the air reduces with altitude and renders the environment more pleasant and refreshing (Sargent, 1964) for breathing, which is affected in efforts in climbing.

Wind: the speed of the wind increases with the altitude for an identical area, and its cooling effects will be dependent upon the situation encountered in the place: on the contrary side of a high area, usually hit by the wind – in maritime areas, it is the opposite side to the sea – there is descending current of air that is warmer (this wind is specifically called Föhn, similar to the known and characteristic phenomenon encountered in the Alps). It will thus be useful to select the cooler side of the mountain. Therefore, one should become acquainted with the wind in the area.

Vegetation: vegetation offers the most favorable bio-physical and psychological conditions to increase the yield of work. Physical effort accomplished in natural surroundings – far from the gymnasiums and athletic tracks – is knowingly more fruitful, considering the training methods which exploit its benefits, such as "Fartlek" of Costa Holmer, or the "Cross Promenade" of Mollet. The Argentine Tortorelli outlines, in this respect, among various positive reasons, the absorption of the impurities of the air, the neutralization of noises and the tranquillizing and resting effects which are caused by the predominance of the green color. This reinforcing effect, encountered in the forest, becomes much more important in sports training in sub-tropical areas. By absorbing solar and atmospheric radiation, an area covered with trees offers always a lower temperature than an open area. A hill, covered with trees, offers this effect, added to that of altitude, and helps the environmental compensation to fatigue of effort that is being carried out.

The characteristic difference between the temperate forest and those of sub-tropical areas, in so far as physiological effects are concerned, seems to reside in the action of forestal aerosols, which are microscopic particles of resinous substances, in state of suspension. In accordance with Tortorelli (1966), in the first type, the forests are usually composed of a dominant type of tree (coniferous, mostly) which originate a specific type of air, determined by the corresponding aerosols. These produce positive stimuli through an indirect influence over the nervous and cardiac system (thence the reasons of the existence of the Therapeutics Aerosol-Forestal). Since in tropical

forests, vegetation is marked by the larger number of species, it seems to be evident that there will always be a beneficial effect, since the positive particles represent the majority of the forestal aerosols.

The author of the present work had opportunity to gather subjective impressions from the training accomplished in a temperate forest, which is theoretically considered as being ideal for muscular activity (Honefoss, Norway, summer 1964) and one applied in a sub-tropical vegetal environment (Sumaré, Rio de Janeiro, autumn 1965 and 1966). As one may observe, the athletes considered this latter type to be less monotonous, both in view of the variety of the vegetation, as well as based upon the aggressiveness of the scenery; the alternance of the closed spaces – upper part of trees, which touch themselves in certain areas, provide the impression of actual tunnels of vegetation – with open spaces, is the peculiar aspect of sub-tropical medium altitudes, which seem to have a more favorable aspect from the psychological point of view.

City and Surroundings: the variation of temperature produced by the location of built-up areas may be relevant in certain cases for the programming of training. Duckworth and Sandberg verified that the temperature of a city is proportional to the constructed area and the population density, conditioning the temperature of adjoining areas. In a general way, the city is warmer in the evening than the suburbs, and the contrary occurs in the morning. Consequently, it will be good to program the periods of the training – both on tracks and mountains – quite early in the morning, in case the available location is in a city, or at night, if it is in the suburbs.

(8) Like any other training method, Altitude Training is only a means and not an end purpose by itself. It is, therefore, important to stress that the yield will reside in the direct relation of the care of the factors that compose the so-called Total Training (Mollet, 1963), which in addition to the development of physical qualities, encompasses medical, social and psychological cares and accuracy of techniques – annual calendar, use of materiel, program of trips, acclimatization, place and discipline in the concentration, warming-up, competition, etc. Within this fundamental norm, the examination of the factors involved and to the functional programming are not envisaged by the present work and should be left at the free decision of the individual responsible for the training. In addition, with regard to the athlete himself, there is the basic and untouchable principle – so many times stressed in this work – of the "Individuality of training", which will originate a large number of variations about the orientation presented herein and with regard to which, to establish a doctrine, we cite the interpretation of Mollet:

"Training is an individual art. There will never be a limit to progress in the training methods. Undoubtedly, the technique will be an exact science; this will never be the case, however, with its practical application, because each athlete always represents a new problem."

Conclusions

1. Man forms a system with the atmospheric environment by which he is surrounded and which is characterized by variations in temperature, humidity, pressure, wind, etc. This system has its internal and external parts separated by the skin, which acts as a neutral element.
2. The system, represented by the relationship between environment and man, is balanced when the internal tem-

perature is approximately 37°C and the external between 28 and 30°C. Outside of these figures, the mechanism of thermoregulation starts to work.

3. The factor of temperature/humidity is the most important one to be taken into consideration in thermoregulation, inclusively by conditioning comfort and human activity. The values of the temperature and humidity, which define the zones of sensations and of production of effort, are a function of the gradient of the movement of air. In addition, the organism has specific reactions to the variations of pressure and to the atmospheric radiations.

4. The circulatory and respiratory systems are most active in the reaction to heat-humidity, and the cardiac frequency and body temperature are safe indexes for evaluating the effects of this factor.

5. Metabolism suffers influences from the temperature and its lower basal values are encountered in the zone of comfort, indicating that there is a minimum expenditure of energy in this specific situation. Nourishment also accompanies the variations in temperature and, in the case of hot surroundings, the deficit of calories is more important than that of the vitamins; in case it is inadequate, there will be deficiencies in thermoregulation.

6. The study of meteorotropical influences in physiological phenomena of physical effort is still in its initial stages. Some qualitative and quantitative measurements are already convergent in some points. It is known, for example, that heat-humidity restricts physical activity. Cardiac frequency, body temperature and perspiration are the normally used parameters for the study of its effects. These details are taken into consideration but on very few occasions, since they are not a priority problem in temperate countries, which are, as a coincidence, leaders of research of physical training.

7. Influence of the heat-humidity factor is only noticeable, in effort, after certain values of temperature and indexes of relative humidity. There is a certain range of these values, whose effects can only be perceived in accordance with the intensiveness of the exercise. Recovery, on the other hand, will be contingent directly upon these values and in environmental conditions, it can be observed through the cardiac frequency.

8. The effects of heat-humidity over resistance and strength still are not very clear. The same does not occur in relation to psychological reactions: one knows that the time of reaction is increased and that the power of concentration and the efficiency of work are reduced when certain values are surpassed.

9. Acclimatization is a phenomenon, the mechanism of which is little known: it involves interposed and simultaneous functions, which make research difficult. Biometeorology studies its gradual effects in relation to time, including the generation of the descendants of individuals removed from their original environments. The more used parameters by research are sweat, cardiac frequency, internal temperature and circulatory and endocrinous systems.

The "time" factor is the functional element envisaged by the experiments. The examination of this factor evidences that physical activity speeds up acclimatization. By presupposing that the acclimatized individual to heat-humidity has a better yield in this work than non-acclimatized individuals, in a tropical climate, it is necessary to dislocate the values of the zones of comfort and of efficiency in the sense of the higher temperatures and relative humidity. Furthermore, it is demonstrated, in this

respect, that this change is not substantial since the limits for the practice of sports can be more easily reached in tropical areas. The fatal cases are rare, either as a result of the defence of the organism which reduces the intensity of the effort, by the nature of the type practised which permits, in certain cases, the alternance of efforts with pauses for recovery. The explanation for the decline in athletic yield in tropical areas would reside in this fact.

10. Individual meteorotropical reactions is an important parameter in the evaluation of biometeorological phenomena. Being a characteristic element of genetics itself, a concept is formed that reactions are always different, but similar. Reduction of a statistical error is obtained through the establishment of group homogeneity, maintaining the diversity of types. Therefore, one considers the followings factors: age, sex, race, color of skin, morphological type, health and habit of adverse conditions.

11. The formula of general terms which will serve as a guide for the research of meteorotropical reactions in effort made in tropical environments, according to a proposition of the author, is the following: meteorotropical reaction = intensity and duration of effort \pm degree of acclimatization - degree of adaptation to effort in hot-humid environments - biological individuality.

12. Field experiments were accomplished, within the earlier premises, with the objective of observing Resistance and Endurance under the light of the accomplished effort in tropical environments. It was concluded that:

- a. Tropical climate limits the capacity of raising the level of possibilities with regard to Resistance and Endurance for the sportive activities which demand efforts at long range.
- b. The decline in the yield may be evaluated at approximately 15% of the potential of the athlete which is defined by the amplitude of the range of fluctuations of his results, obtained during the period of time considered. This decline in performance is relative to marks obtained, respectively, at 20 and 30 °C of average temperatures in the shade and under an index of relative humidity around 80%. In case the athlete increases the intensity of the performance, the production will decline quickly and in accordance to a parabolic curve.
- c. Training is thus limited by the external conditions, which by enabling to attain the maximum capability of the individual, does not permit that there be a corresponding development.

13. Observation of the facts reinforces these statements

and conducts to us to the supposition that the ideal climate for sportive activities is the dry climate, without extremes of cold and heat. On the other hand, tropical climate would offer exceptional advantages with regard to water sports.

In any way, the increase in the level of possibilities for the tropical ground athlete can only be obtained through the exploitation of permanent and temperate micro-climates. This type of environment can be located through a geosportive survey and offers the easiness of being able to work during the whole year, providing flexibility for the annual calendar, which would not be based on the seasons of the year.

This easiness would only be encountered in tropical and sub-tropical areas, counterbalancing the negative factors and would also provide a considerable advantage over the athletes of the temperate regions.

14. The author made a survey of this type and used a mountain of 1000 meters altitude, where he applied a mixed method of training. It was found in the experimental group that only the dislocation of part of the training to a more indicated environment rose the level of possibilities by 10% within the short period of 12 weeks, with regard to the results that were obtained earlier through different processes with some elements in decadence. In view of the hypothesis of altitude influence, new research was developed at the end of which it was established, in experimental character, that the concept and method of Altitude Training would be a method of priority feasibility for tropical and sub-tropical climates.

15. Basically, Altitude Training envisages to exploit altitude as a form of physical preparation and does not restrict itself to training in altitudes, but to pass from one level to another, so as to encounter a progressive decline in the partial oxygen pressure. The altitude in this process acts as a "load" of a given exercise, and then specific functional adaptations will arise in relation to the resistances offered by altitude and by the difficulty of making progress in inclined ground, and not the modifications of physiological order that are normally observed in the phenomenon of acclimatization.

16. Essentially, to train in high places originates performances of improved nature in lower levels, but in transitory conditions, because the advantage disappears at the end of a few days, whilst through Altitude Training, one attempts the permanent establishment of the benefits of altitude.



blood boosting: only a legal issue? transfusion sanguine: issue légale?

by Allan H. RYAN, MD

The aftermath of the inexcusable blood boosting of seven members of the US Olympic Cycling Team last summer has brought out something unanticipated that has escaped public comment. It is the way in which the drug-testing procedures and the amateur sport regulations against drug abuse confused and influenced the attitudes of the athletes, coach, technical adviser, and physician toward blood boosting. The regulations and testing procedures have received much attention in recent years. The fact that the Medical Commission of the International Olympic Committee (IOC) has assumed responsibility for both approaches to improving performance, even though without a forthright ban on blood boosting, has something to do with this and perhaps contributed to their confusion.

The IOC Medical Commission statement says in part that it is forbidden for any competitive athlete under its jurisdiction to use "any physiological substance taken in an abnormal quantity or taken by an abnormal route of entry into the body with the sole intention of increasing in an artificial and unfair manner his (her) performance in competition". This might leave some room for argument if you are considering reinfusion of an athlete's own blood. If the intent is to ban that action, the statement should be more specific. If you are considering the use of someone else's blood, which was the situation in this case, there is no doubt about the prohibition in spite of the stated rationalizations of those who were involved. Yet

the coach was quoted in *Sports Illustrated* ("Triumphs tainted with blood", Jan 21, 1985, page 12) as having told the cyclists it was legal. The technical director was quoted as saying, "I had a moral obligation to myself and to [the riders] to get them somebody to help them." The physician who withdrew and administered the blood was quoted as saying, "I tell him first I never do anything that is risky, unethical, or illegal."

John Beckman, one of the cyclists who took the blood, was quoted as saying, "You can't just say doing that is wrong, or doing that is right. If anybody did do any blood boosting, it's their own business." Danny Van Haute, who had his blood reinfused before the US team trials last July was quoted as saying, "I didn't think it was wrong at the time because you can't detect it." That statement crystallizes the feelings of all who were involved. Whether the procedure was ethically, morally, or medically correct didn't seem to matter. The key question they apparently asked themselves was, "Can we get away with it?" They decided they could and at the time of the event thought that they did - four of the eight team members who took the blood won medals (one gold, four silver, one bronze). However, team members who didn't take blood won five other medals (three of them gold). Subsequently, the US Cycling Federation issued an absolute ban against blood boosting and suspended the coach and technical director for 30 days without pay (a slight penalty under the circumstances).

Drug testing was introduced to international sports competition almost ten years ago. It has not proved to be an effective deterrent to drug abuse and misuse by athletes except before specific events - the evidence shows an overall increase rather than decrease. When confronted with the fact that there is no credible evidence that any drug will improve sports performance, advocates take refuge in claiming that they are interested only in protecting the athletes' health. I don't think they had anticipated that athletes would use drugs as a means to convert what should be an ethical, moral, and health discussion into a purely legal issue. That makes the necessary continuing education much tougher.

Reprinted from the «Physician and Sport Medicine», vol. 13,4: 45.

RESUME

Cet article traite du dopage sanguin qui a été constaté chez sept athlètes lors des Jeux Olympiques de Los Angeles.

Ce moyen de dopage consiste à injecter, avant la compétition, du sang dont la teneur en globules rouges a été augmentée au cours d'un stage en altitude. Ce sang peut provenir de l'athlète même ou d'un autre athlète. Il est très difficile de détecter ce mode de dopage dont l'efficacité est d'ailleurs douteuse selon l'auteur.

headguard in amateur boxing

le port du casque en boxe

by Dr. Joseph FALLETTA*



The question of headguards in amateur boxing remains a very controversial issue. Recently, at the AIBA Medical Meeting held at the Los Angeles Olympics, it was a stand-off draw as to wear or not to wear headguards in future international amateur contests. Yes, there are boxing physicians who vote against the use of headguards. The position in the Canadian Amateur Boxing Association is that of mandatory use; the U.S.A. has an optional choice. However, more and more American boys are adopting it. Even the ancients in B.C. times had a form of headguard called the «amphitodes».

What are the distinct advantages of it? Firstly, and foremostly, it reduces the contrecoup effect exerted on the falling head of a stricken boxer who is sent hurling towards the stationary ring floor. The scenario is indeed similar to the protection afforded football and hockey players when they are sent downward towards the turf and ice respectively. Secondly, the headguard reduces the impact of a blow hurled against the skull, in particular the frontal and temporal areas of same. The impact of a given blow is felt less with headguards than without. This was amply proven by the Schmid-Habijk European study of 1968. Mind you, it does not erase knockouts. A boy can be chinned or hit in temporal areas and still be kayoed. Thirdly, the headguard reduces considerably the incidence of facial lacerations, but in particular, supraorbital lacerations which can disable a boxer. It does not totally erase their presence. This was proven by observations at the recent Los Angeles Olympic Games and also by the studies of American Boxing Physician, Mickey Demos, in a two-year study of 1979-80. Herein, the bout is not stopped prematurely owing to lacerations whereby the winning boxer loses the match through an inflicted laceration; here, the headguard reduces the incidence of said telling lacerations.

Fourthly, the headguard reduces the incidence of the cauliflower ear, i.e. hematoma of the external ear; it reduces the incidence of the perforated eardrum but does not totally erase it.

Fifthly, the headguard reduces the incidence of facial stigmata usually associated with pro boxing i.e. hypertrophied superciliary ridges

of scar tissue, cauliflower ears, perforated eardrums.

If one looks at the Dr. Demos study of 1979-80, the important points are these. There were some 174 injuries arising from some 12,100 contestants. Lacerations incurred with headguards were 11 in number, whereas there were 42 lacerations without. However, the KO's remain equal... 7 without and 6 with. Headaches, blurred vision and contused ears were predominant in the boxers without headguards. Therefore, I feel that headguards remain monumentally instrumental in reducing the incidence of facialhead injuries to a boxer.

The detractors of headguards cite several disadvantages:

Firstly, it is stated that the headguard invests an aura of invincibility about the boy's head. In other words, "I have the headguard on; I cannot be hurt." Therefore, some boys will inch closer to their opposition. However, in rebuttal, I say that the seasoned amateurs know that is a mythical attitude and soon renounce it. The fact that boys with headguards are victimized by KO's is proof against this tenderfoot belief.

Secondly, it is stated that there is a continual adjustment of the headguards during a match whereby the boy uses his gloves for adjustment of headguard rather than for defence. Often, the pro fighting without headguards executes these conditioned reflexes in a match as if he were adjusting his headguard in a sparring session. To this, I say that the headguard must be form fitting and personalized as much as possible in order order to ensure snug fitness and proper hygiene. It should be tailor made to the specific boxer to minimize excessive adjustment and readjustment and actual ejection off the head as seen in the L.A. Olympics. Each boxer should have his own headguard as he does his own mouthpiece or jockstrap to ensure proper head fit and optimal hygiene.

Thirdly, it is stated that some headguards, in these cases, the older ones, induce sharp supraorbital lacerations owing to their sharp borders; some with cheekbone protectors can hamper vision and induce zygomatic facial laceration. True. However, this scenario is witnessed with the older headguards with sharp supraorbital borders

and these antiques should be discarded. As for cheekbone protectors, I am not a great fan of them. They can hamper vision and may prove instrumental in inducing a mid facial laceration.

Fourthly, it is stated that the headguard provides a larger target for the opposition and, as a result, more knockouts occur. This was the argument issued by some boxing physicians at the L.A. Olympics against the use of headguards. I cannot and do not accept this for the prevalence of a knockout is not dependent on the presence of a headguard but upon other more salient factors such as the force, velocity and timing of a blow and the ability of one to accept that blow.

Fifthly and legitimately, it is stated that the headguard absorbs boxer's sweat, and hence becomes a "heavy weight" for his weary neck muscles to carry. Therefore, the head is not held taut and the boxer becomes most vulnerable for a knockout. Quite true, and this leads me into a discussion of the qualities of "good" as opposed to "bad" headguards.

A GOOD headguard should be padded in the strategically vulnerable craniocerebral areas, i.e. the temporal and occipital areas. Here the skull is relatively thin as compared to the thick frontal areas. The ties should be atop the head... not at the occiput area. Too often, the frontal area of the headguard is laden with padding. There should be no sharp cutting borders above and about the eyes of the boxers in order to minimize supraorbitally induced lacerations. It should be a personalized form of equipment much like his own social insurance number; this ensures form fitting and an adequate degree of hygiene. It should be non absorbent in weight moisture and light in weight so as to impose minimal stress on the neck musculature. How light? It should be lighter than 300 grams. How was this gram number arrived at? Mainly through the work of a Japanese neurosurgeon on the AIBA MEDICAL STAFF, Dr. Yukio Yoshida. He did many experiments on headguards of different weights and found that the heavy headguards (over 500 grams) imposed a burden on the neck muscles fatiguing them readily with excess lactic acid production thus promoting slow movements of head and hence vulnerability to a knockout. His final conclusion was that the lighter non ab-

* Note: Reprinted from A.I.B.A. magazine.

sorbent headguards should be worn, i.e.-100 grams up to lightweight 200 grams for a middleweight not over 300 grams for heavy weights. Now an adaptation of the Yoshida headguard was used at the Los Angeles Olympics but manufactured by the Everlast Company. No major problems were encountered with its use except for some ejection literally off the heads of the boxers; this was owing to malstrapping of the equipment. I would add another item for inner lining

usage within a headguard; that is, the use of a temper foam lining as seen in the helmets of the Cape Kennedy astronauts. This is an excellent cushioning agent and serves as an excellent interface between headguard and skull. So far, no one party has ventured to use it. In summary, let me say that the advantages of headguards outweigh their disadvantages. They reduce the impact of blows, reduce the disabling effect, reduce lacerations, particularly supraorbital, and reduce

the incidence of cauliflower ears. They do not erase the incidence of a knockout. There exist both good and bad headguards. The good are from fitting, personalized, padded in the temporal-occipital areas, are relatively light in weight and nonabsorbent re moisture. I fervently support the use of headguards in all amateur boxing, be it provincial, national or international. I feel that the use of headguards will serve to reduce dramatically any incursions of morbidity into amateur boxing.

evaluation of boxers' performances through selected tests

évaluation des performances du boxeur

by Dr. Jerzy FIDZINSKI

The method of teaching complicated behaviours and movements can be intensified through boxing. It has a high moral and educational value. It is attractive and encompasses the requirements of physical and psychological development of those who wish to practice this sport further. In order to achieve the personal development of the motor characteristics and to adapt the motor performance to the demands for a high technical and tactical level, the boxing teacher and coach must consciously contribute to the development process including training and competition. In this situation, comparison on the methods of preparation with the athletic results achieved gives the opportunity to correct these methods in the future. The comparison revolves principally around the correct choice of methods and techniques for measuring, the specialized physical performance level and movement used in training and required in a boxing match. Since the results in boxing are not

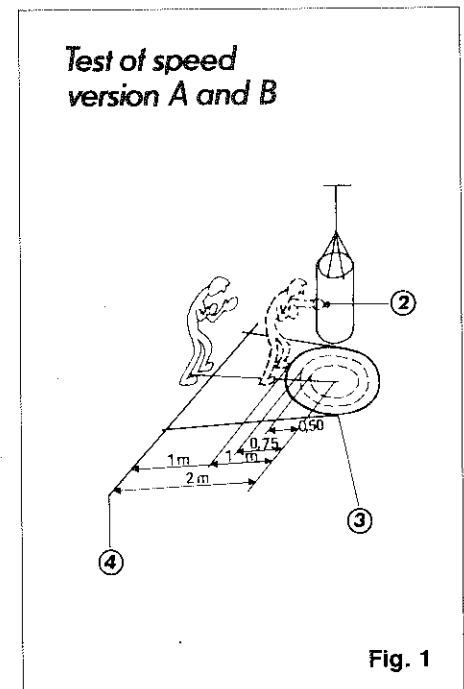
subject to direct measurement the proper evaluation and correspondingly, the precise analysis of the different results pose great difficulties for the trainer active in this field. To a certain degree it is dependent on the visual impressions of those responsible for marking the assessment as well as on the variable settings in which they must be made.

A demonstration of the successful development and progress in the level of achievement of a boxer is the correct choice and the successful performance of movement exercises and associated tasks. This demands precise information on the current status of the functional possibilities of the organism, the status of the indicators of physical achievement as well as the potential movement possibilities which the athlete has.

Various methods of evaluating the content and the course of training and athletic competition are required to bring in up-to-date information concerning these problems. The tests which are suggested below, allow

the trainer to evaluate the principal elements of physical performance level as well as the technical - tactical skill of the athletes at least in a certain degree. At the same time they facilitate the formulation of didactic - methodologic approaches which increase the effectiveness of the attitude and action of the athlete in competition. Every stage of the process of development of a boxer demands different types and different tests of assessments by the trainer. These may be grouped according to their function as in the following scheme:

- Universally applicable tests which are useful both in competitive sports and in the broader context of physical education,
- Tests of the level and forms for mastering the motor characteristics for the requirements of various forms of sport,
- Evaluation of the goal-oriented and special forms of accomplishment which are of importance only for a particular sport or a closely-related group of



Test of endurance version A and B

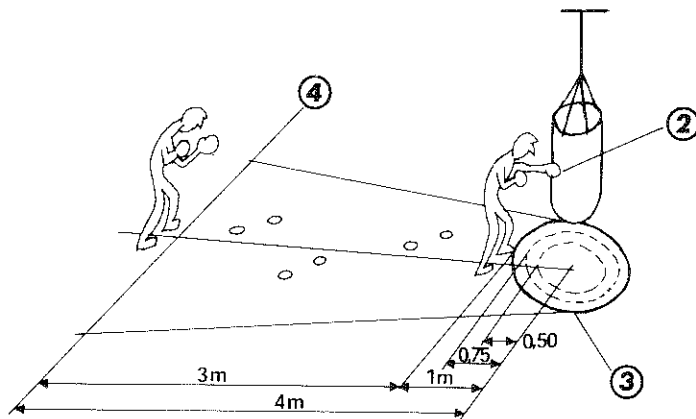


Fig. 2

sports which have similarities in character to contact sports.

The evaluation or assessment of pedagogic characteristic of the training of athletes who wish to undertake boxing is based on taking advantage of existing tests and control methods which are related to the specific stresses and similar to the actual activities which a boxer undertakes in the course of a match. Goal-oriented tests able to qualitatively and quantitatively assess special forms of work (technique - tactic) which must be carried out in a specific time period (seconds, minutes) are useful in assigning an athlete to the correct level of training and thereby to create homogeneous training groups. They pay witness to progress or stagnation of the level of achievement at various levels of training. The status of research and the analysis of the results of observations of boxing matches permit one to determine that legwork, punches and defense determine the success of the stance and action of the athlete in the actual competition.

Here the objection is raised that one selects two appropriate tests of the many used in boxing to assess specific speed and endurance within parameters of the structure of movements in the corresponding time intervals. The condition course, norms and assessments of these tests will be presented in the following description:

1. Tests of speed (fig. 1)

Goal: The largest possible number of single punches (version A) or simple double punches (version B) in 20-second time intervals with a pause of one minute.

Task: The largest possible number of punches delivered with their own rhythm while the boxer stands in place - in movement (in the 1 version), or with change in place - alteration of distance (in the B version). In the latter changes in leg movements (steps, attack-springs and avoidance manoeuvre) should be demonstrated.

Devices, aids: Hanging sand bag with a defined target area, colored lines-points for

determining specific distances, whistle, stopwatch.

Conduct of the test - Version A:

The athlete takes a suitable position in front of the sand bag. Following the trainers whistled signal, he delivers simple, single punches to the designated point on the sand bag for twenty seconds. One must pay particular attention to see that the starting position and original posture are continuously resumed and that the selected rhythm is maintained.

Version B

Is the same as above with the distinction that the athlete delivers simple punches left - right or right - left. That is dependent upon the boxer's starting position.

Versions A and B

are conducted in place and in movement as well as with the use of legwork (step, attack-spring.) After having determined the optimal distance for each individual athlete, one should conduct a version of that test based on the conduct of the same legwork

Test of endurance version A and B

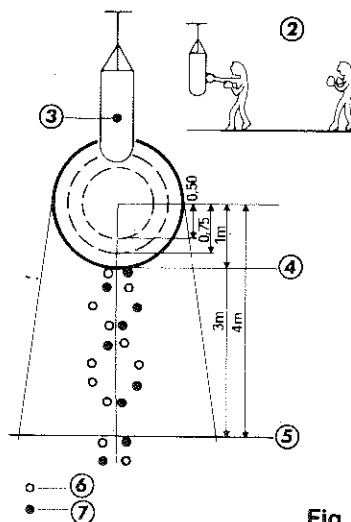


Fig. 3

in time segments of 20 seconds. Alteration in the rhythm, or the maintenance of the rhythm of the frequency of blows or leg movements, leads to an interruption of the test.

Evaluation: The number of correctly conducted activities in twenty seconds is counted.

EXAMPLE

Based on the results of the tests by an advanced athlete

version A

- blows in place: 20 seconds (51 blows)
- blows with attack-spring: 20 seconds (23 blows)

with steps

version B

- two blows in place: 20 seconds (26 blows)
- two blows with attack-spring: 20 seconds (21 blows)

with steps

II. Tests of endurance (fig. 2 and 3)

Goal: The maximum number of single simple blows are to be performed (version A) or three simple blows in the form of a series (version B) in intervals of three rounds each consisting of three working minutes with a pause of one minute after each round.

Task: the largest possible number of correctly conducted movements ought to be performed with determination of an optimal distance through the simultaneous conduct of a series of single blows in the course of a nine-minute work-out at the sand bag.

Apparatus and aids: Hanging sand bags with defined target areas. A series of circles should be drawn as lines for leg positioning around the bag at distances of 0.5m, 0.75 m and 1.0 m. Designation of a starting point and a limiting line for movement in a distance of 3 m from the point of optimal distance which allows the simple punches to be delivered.

Stopwatch, whistle, chalk.

Version A

Conduct of the test: The athlete stands at the starting place and begins the test on the signal. Conduct of a maximum number of repeated movements for the time period of the test to be carried out in the following order:

- a) rapidly covering the distance from the starting line to the line marking the optimal distance,
- b) in the course of covering the distance a step or jump, first left then right, must be performed. One can begin in the reserve fashion in that one does not proceed along a straight line from the starting point to the line of the various distance variants.
- c) Simple blows in a self-selected rhythm and frequency must be delivered to the designated point.
- d) The boxer returns voluntarily to the starting line in the fastest manner.

Version B

All activities as above. The alterations referred to c). Instead of single blows, a series

of three simple blows: one – pause – one or pause – one – pause.

Control of activity: This is based on evaluation of the athlete and his performance in the time at the three meter distance which separates the starting line from the line at which the assigned action will be carried out. This is divided in the following manner:

Version A – simple blows,

Version B – Three related blows in a series. Failure to maintain the rhythm leads to interruption of the test.

Evaluation: The number of activities conducted in the corresponding tempo are balanced: three rounds of work each lasting three minutes. Correctness of the structure and optimal time are taken into account.

EXAMPLE

Based on the results of an advanced athlete

Version A – Legwork, distance single blows in the course of three minutes: 3 minutes (48 blows)

Version B – Legwork, distance three related blows in three minutes: 3 minutes (54 blows)

In the foreseeable future we will be able to evaluate the possibilities to prepare an athlete for a confrontation in the ring under conditions of a complete and complex study. The ability to assess the boxer's status is one of the major problems facing our sport.

Notes on figures:

- fig. 1 Test of speed version A and B (1), target point (2), optimal distance line (3), starting line (4).
- fig. 2 Test of endurance version A and B (1), target point (2), optimal distance line (3), starting line (4).
- fig. 3 Test of endurance version A and B (1), detail "A" (2), target point (3), optimal distance line (4), starting line (5), left starting position (6), right starting position (7).

RESUME

Les deux articles retenus sur la boxe ont été repris du magazine de l'AIBA.

LE PORT DU CASQUE DE BOXE

par le Dr. Joseph FALLETTA.

Le premier article énumère les avantages du port d'un casque protecteur par les boxeurs: le casque réduit l'impact des coups, mais avant tout il diminue considérablement les risques de blessures à la tête, aux arcades sourcilières et aux oreilles provoquées par le combat ou par la chute du boxeur.

Les détracteurs du casque, de leur part, en citent quelques inconvénients:

- le casque crée chez le boxeur une illusion de protection totale de la tête, et donc, d'invincibilité;
- le réajustement continu par le boxeur durant le championnat se fait au détriment de sa technique de défense;
- les bords mal arrondis des anciens casques causent de nombreuses blessures;
- le casque agrandit la surface de frappe;
- le casque absorbant la transpiration, devient une lourde charge pour le boxeur.

L'auteur termine son article par la description du casque idéal.

EVALUATION DES PERFORMANCES DU BOXEUR,

par le Dr. Jerzy FIDZINSKI.

L'auteur décrit un moyen simple d'évaluer les performances du boxeur à partir de deux tests:

1. Test de vitesse

version A: le plus grand nombre possible de coups simples en 20 secondes;

version B: le plus grand nombre possible de coups doubles en 20 secondes.

2. Test d'endurance

version A: le plus grand nombre possible de coups simples en 3 rounds de 3 minutes. (1 minute de repos après chaque round).

version B: voir version A mais en appliquant des coups doubles.



En 1962, suite à un colloque en Tunisie le C.I.S.M. a décidé de rendre obligatoire le port du casque.



le stretching ou étirements musculaires stretching in sport

par le Médecin Colonel J. MOLINIE
Directeur de l'Académie du C.I.S.M.

Origines

Immémorables puisque déjà pratiqué dans le yoga indien et retrouvés dans d'anciens documents chinois. Utilisé également en physiothérapie: Méthode Kabat (Proprioceptiv Neuromuskulär Fäciliteringbehandling ou PNF).

Le stretching a affiné ses méthodes grâce à Robert ANDERSON (U.S.A.) et a été développé en Californie par Trudy HARRIS. Le Docteur EKSTRAND (Suède) attache son nom à ces techniques d'étirement du fait de ses recherches.

Définition

Le stretching est une technique d'étirement musculaire à but restitutif au-delà des efforts et à rôle préventif vis-à-vis des accidents musculotendineux, destinée à résoudre les raccourcissements musculaires et à pallier leurs conséquences, basée sur la réponse physiologique musculaire réflexe d'inhibition suscitée par la contraction musculaire intense.

Les bases physiologiques de la technique

La contraction musculaire met en jeu l'étirement des fibres neuromusculaires des fuseaux neuromusculaires du muscle qui se contracte. Cet étirement est le point de départ du réflexe d'inhibition du muscle antagoniste qui alors se relâche pour ne point s'opposer au mouvement.

Si la contraction exigée du même muscle se poursuit, les récepteurs de Golgi situés au niveau de la jonction musculotendineuse du muscle sont sollicités. Ils sont le point de départ d'un réflexe d'inhibition de la contraction du muscle auquel ils appartiennent. Plus ils seront sollicités, plus le muscle se relâchera rapidement et complètement.

D'où la technique du stretching: Contraction du muscle ou du groupe de muscles avec la force la plus grande possible contre résistance et de façon isométrique pendant 10 à 30 secondes.

Relâcher pendant 2 à 3 secondes. Puis avec douceur étendre au maximum et aussi loin que possible, puis conserver cette position pendant 10 à 30 secondes.

Buts et effets recherchés

Il n'est pas de sport qui ne sollicite préféren-

tiellement un ou plusieurs groupes musculaires. Sous l'effet de l'entraînement (s'il est mal conduit), les muscles gagnent en qualité (de force, d'endurance, de résistance,...), mais la souplesse de l'individu risque d'être altérée par les raccourcissements musculaires qui sont apparus. Par ailleurs, un seul entraînement en musculation a pour conséquence un état de contracture tonique qui maintient le muscle en état de raccourcissement pendant quelques heures. Que survienne dans l'un ou l'autre cas un mouvement de grande amplitude ou de haute intensité, le muscle et ses annexes (tendons, insertions) vont être exposés à l'accident.

D'autre part, l'entraînement privilégie certaines actions musculaires et vise à augmenter la force musculaire, donc le pouvoir contractile du muscle, sans s'intéresser au pouvoir élastique de ce tissu. Le déséquilibre qui en découle fait que le rôle d'amortisseur qu'ont les structures musculaires élastiques n'est plus rempli et une contraction brutale ou un étirement excessif peut être préjudiciable à l'ensemble muscles et annexes.

Enfin, au-delà de tous les efforts, le tissu musculaire justifie d'être irrigué au maximum pour pouvoir se débarrasser des déchets toxiques provenant des métabolismes énergétiques et pour pouvoir se réapprovisionner en substances nourricières et en oxygène épuisés pendant l'effort. La vascularisation capillaire se fait mal à l'intérieur du muscle raccourci, contracté et la récupération est d'autant plus ralentie.

Le stretching a donc tout à la fois un rôle préventif et un rôle dans la récupération des efforts.

Il a également un rôle dans la préparation de l'athlète à la performance:

- en permettant par la pratique des contractions isométriques prolongées un réchauffement musculaire optimal;
- en permettant une amplitude gestuelle accrue toujours utile quel que soit l'acte sportif, puisque l'on sait que l'action de la contraction musculaire est d'autant plus efficace que le muscle moteur intéressé a été plus étiré.

Les buts du stretching sont donc:

- d'améliorer les possibilités élastiques musculaires;
- d'améliorer les possibilités de récupération du tissu musculaire;
- d'éviter les coups de fouet brutaux de contractions ou d'étirements sur les tissus musculaires tendineux et osseux généra-

teurs d'incidents ou d'accidents pathologiques.

Conséquences

Cette technique pratiquée trois fois par semaine comme une séance d'entraînement avant et après l'action sportive ne peut avoir que des conséquences bénéfiques.

Les différentes méthodes de stretching

- Ballistic and Hold: balancement et position gravitaire.
- Passive lift and Hold: traction passive et position maintenue.
- Prolonged stretch: stretching prolongé par un tiers.
- Active P.N.F.: étirement actif, puis contraction des antagonistes contre résistance, puis étirement passif maximal.
- Passive P.N.F.: étirement passif extrême, puis tension maximale des antagonistes contre résistance, puis étirement passif.
- Relaxation Method: étirement passif maximal par un tiers en restant en état de relaxation maximale.

Bibliographie

Le Stretching du Sportif
par Sven A. SOLVEBORN
Editeur Chiron Sport

SUMMARY

The Director of the CISM Academy, Colonel J. MOLINIE MD (France) sets out the modern trends observed in the use of «Stretching». After retracing its origins and giving data on the definition and techniques involved, he emphasises the dual role of stretching: prevention and muscular recuperation after exertion. This technique, used three times a week at a training session and before and after a sports event, will undoubtedly contribute to the improvement in an athlete's performance.



30th PAIM Championship 30ème Championnat de PAIM

Pirassununga (Brazil),
12-17/7/1985

PARTICIPATING COUNTRIES

8: Brazil, Argentina, Denmark, Spain, Finland, France, Norway, Sweden.

OBSERVERS

Netherlands, Peru.

OFFICIAL CISM REPRESENTATIVE

Major General D. Klik (Netherlands).

P.T.C. CHAIRMAN

Colonel P.J. Widmark (Sweden).

RESULTS

FLYING EVENTS - EPREUVE DE VOL AERIEN

Was not held - N'a pas eu lieu.

SPORTS EVENTS - EPREUVES SPORTIVES

1. Overall results - Résultats d'ensemble

INDIVIDUAL CLASSIFICATION CLASSEMENT INDIVIDUEL	
1. L. Pettersson (SWE)	5.114 pts
2. J. Plaza (ESP)	4.918 pts
3. F. Silva (BRA)	4.791 pts

TEAM CLASSIFICATION CLASSEMENT PAR EQUIPE

1. Sweden	14.122 pts
2. Brazil	14.063 pts
3. Spain	14.044 pts

2. Results by discipline - Résultats par discipline SHOOTING - TIR

L. Luengo (ESP)	1.040 pts
2. F. Silva (BRA)	1.020 pts
3. G. Talavera (ESP)	1.020 pts

FENCING - ESCRIME

1. L. Pettersson (SWE)	1.195 pts
2. J. Plaza (ESP)	961 pts
3. M. Salminen (FIN)	961 pts

BASKETBALL

1. J. Plaza (ESP)	998 pts
2. P. Russo (BRA)	974 pts
3. F. Silva (BRA)	916 pts

SWIMMING - NATATION

1. H. Rosen (SWE)	1.186 pts (*)
2. F. Silva (BRA)	1.100 pts
3. G. Espresati (ESP)	1.096 pts

OBSTACLE RACE - COURSE D'OBSTACLES

1. V. Heinonen (FIN)	1.044 pts
2. H. Rosen (SWE)	1.042 pts
3. H. Havoll (NOR)	1.036 pts

ORIENTEERING - ORIENTATION

1. L. Pettersson (SWE)	1.017 pts
2. J. Petersen (DEN)	1.016 pts
3. E. Dokken (NOR)	1.015 pts

(*) New CISM record - Nouveau record du CISM.

We convey our hearty congratulations to Major Lennart PETERSSON (Sweden) who has been the overall CISM champion on no fewer than nine occasions. You will recall that the Major's remarkable training programme was covered in «Know your Champions» - Sport International n° 60 (August, 1983).

Nous félicitons le Major Lennart PETERSSON (Suède) qui à neuf reprises est devenu champion absolu du PAIM dans le CISM. Nous avons déjà évoqué le remarquable entraînement du Major Pettersson dans la rubrique «Connaissez vos champions» du Sport International n° 60 (Août 1983).



14ème Championnat de Judo 14th Judo Championship Riccione (Italie), 8-16/6/1985

PAYS PARTICIPANTS

14: Italie, Algérie, R.F. Allemagne, Autriche, Belgique, Corée R., Espagne, Etats-Unis, Finlande, France, Guinée, Koweït, Nigéria, Pays-Bas.

REPRESENTANT OFFICIEL DU CISM

Général-Major Yong Chik Park (Corée, R.).

PRESIDENT DU C.T.P.

Colonel J. Herzog (Autriche).

RESULTATS

CLASSEMENT PAR EQUIPE - TEAM CLASSIFICATION

1. France
2. Italie
3. Belgique
Corée, R.

CLASSEMENT INDIVIDUEL - INDIVIDUAL CLASSIFICATION

SUPER LEGER - SUPER LIGHT (—60 kg)

- | | |
|----------------|-------|
| 1. R. Rennella | (ITA) |
| 2. A. Raekorpi | (FIN) |
| 3. Beniamini | (ITA) |
| J. Le Sonn | (FRA) |

MI-LEGER - HALF-LIGHT (—65 kg)

- | | |
|-----------------|-------|
| 1. Kang Eni Sun | (KOR) |
| 2. P. Laats | (BEL) |
| 3. P. De Luca | (ITA) |
| P. Roux | (FRA) |

LEGER - LIGHT (—71 kg)

- | | |
|--------------|-------|
| 1. Bertini | (ITA) |
| 2. C. De Vos | (BEL) |
| 3. M. Gadon | (FRA) |
| R. Matusche | (RFA) |

MI-MOYEN - LIGHT-MIDDLE (—78 kg)

- | | |
|------------------|-------|
| 1. Lee Soon Tae | (KOR) |
| 2. Cho Hyung Soo | (KOR) |
| 3. P. Bourdon | (FRA) |
| P. Oleari | (ITA) |

MOYEN - MIDDLE (—86 kg)

- | | |
|--------------------|-------|
| 1. P. Seisenbacher | (AUT) |
| 2. A. Perrier | (FRA) |
| 3. Argentin | (ITA) |
| E. Vanderberg | (HOL) |

MI-LOURD - LIGHT-HEAVY (—95 kg)

- | | |
|-----------------|-------|
| 1. M. Vecchi | (ITA) |
| 2. R. Van Ooyen | (HOL) |
| 3. H. Reiter | (AUT) |
| J. Saari | (FIN) |

LOURD - HEAVY (+ 95 kg)

- | | |
|-----------------|-------|
| 1. W. Wilhelm | (HOL) |
| 2. M. Daminelli | (ITA) |
| 3. J. Besse | (FRA) |
| J. Schmoller | (AUT) |

TOUTES CATEGORIES - ALL CATEGORIES

- | | |
|--------------------|-------|
| 1. P. Seisenbacher | (AUT) |
| 2. J. Besse | (FRA) |
| 3. H. Hornuss | (RFA) |
| W. Wilhelm | (HOL) |

The superb competition area.





28th Swimming Championship 28ème Championnat de Natation

Warendorf (Germany F.R.),
9-17/9/1985

PARTICIPATING COUNTRIES

12: Germany F.R., Austria, Belgium, Canada, China P.R., Egypt, France, Guinea R., Italy, Netherlands, Sweden, United States.

OFFICIAL CISM REPRESENTATIVE

Lt-Colonel M. King Hogue (United States).

P.T.C. CHAIRMAN

Lt-General F. De Vos (Belgium).

RESULTS - RESULTATS

HOMMES - MEN

100 m free-style - 100 m nage libre	
1. M.L. Ti (CHN)	0:52,81
2. R. Haltzahn (RFA)	0:52,99
3. B. Gutzeit (FRA)	0:53,06
200 m free-style - 200 m nage libre	
1. M. Gross (RFA)	1:55,40(*)
2. R. Henkel (RFA)	1:55,41
3. I. Dilger (RFA)	1:56,14
100 m backstroke - 100 m dos	
1. F. Delcourt (FRA)	0:59,34(*)
2. H. Fredin (SWE)	0:59,59
3. P. Stefan (RFA)	0:59,73
200 m backstroke - 200 m dos	
1. F. Delcourt (FRA)	2:08,10
2. H. Fredin (SWE)	2:08,80
3. D. Lange (RFA)	2:09,67
100 m butterfly - 100 m papillon	
1. M. Gross (RFA)	0:55,76(*)
2. K. Ortwein (RFA)	0:58,64
3. R. Maltzahn (RFA)	0:58,67
F. Pietrolati (ITA)	0:58,67
200 m butterfly - 200 m papillon	
1. M. Gross (RFA)	2:03,64(*)
2. M. Maillot (FRA)	2:12,25
3. K. Ortwein (RFA)	2:13,72
100 m breaststroke - 100 m brasse	
1. T. Bohm (AUT)	1:06,06(*)
2. A. Pettersson (SWE)	1:07,62
3. H. Wedeking (RFA)	1:07,89
200 m breaststroke - 200 brasse	
1. T. Bohm (AUT)	2:27,00
2. H. Wedeking (RFA)	2:27,65
3. F. Kleinert (RFA)	2:27,98

200 m individual medley - 200 m individuel 4 nages

1. A. Pettersson (SWE)	2:07,74(*)
2. M. Divano (ITA)	2:09,31
3. C. Qin (CHN)	2:10,81

400 m individual medley - 400 m individuel 4 nages

1. M. Divano (ITA)	4:33,52(*)
2. A. Pettersson (SWE)	4:39,68
3. M. Van de Weghe (BEL)	4:42,54

4 x 100 m free-style - 4 x 100 m nage libre

1. Germany F.R. (Henkel, Dilger, Kühlem, Maltzahn)	3:31,43
2. France (Bataille, Gutzeit, Viquerat, Delcourt)	3:33,37
3. Italy (Pietrolati, Bollati, Pattini, Ceccarini)	3:33,94

4 x 200 m free-style - 4 x 200 m nage libre

1. Germany F.R. (Maltzahn, Henkel, Dilger, Gross)	7:41,60(*)
2. France (Bataille, Gutzeit, Viquerat, Delcourt)	7:54,20
3. Italy (Pietrolati, Bollati, Divano, Ceccarini)	7:59,02

4 x 100 m medley - 4 x 100 m 4 nages

1. Germany F.R. (Peter, Wedekind, Gross, Maltzahn)	3:54,76(*)
2. Italy (Pettini, Ceresi, Tornatore, Ceccarini)	4:00,57
3. Sweden (Fredin, Pettersson, Axelsson, Almström)	4:00,63

WOMEN

100 m free-style - 100 m nage libre

1. X. Fang (CHN)	1:00,56(*)
2. Z. Xia (CHN)	1:00,91
3. K. Burton (USA)	1:02,35

100 m backstroke - 100 m dos

1. Z.Z. Xin (CHN)	1:09,02(*)
2. S. Wei (CHN)	1:12,29
3. K. Burton (USA)	1:12,82

100 m butterfly - 100 m papillon

1. S. Wei (CHN)	1:06,20(*)
2. X. Fang (CHN)	1:08,81
3. K. Burton (USA)	1:09,21

100 m breaststroke - 100 brasse

1. X.Y. Hua (CHN)	1:19,18
2. K. Burton (USA)	1:22,38
3. J. Johnson (USA)	1:24,05

4 x 100 m medley - 4 x 100 m 4 nages

1. China P.R. (Xin, Hoa, Hei, Fang)	4:38,95
2. United States (Gabriels, Johnson, Burton, Wright)	4:56,09

(*) New CISM record - Nouveau record du CISM.

WATERPOLO

Participating Countries: 5

Germany F.R., Belgium, France, Italy, Netherlands.

1. BEL - ITA	5-13
2. HOL - FRA	6-7
3. BEL - HOL	9-20
4. ITA - RFA	5-10
5. RFA - HOL	11-10
6. BEL - FRA	6-9
7. ITA - FRA	7-7
8. BEL - RFA	6-19
9. FRA - RFA	4-12
10. ITA - HOL	8-7

Classification

1. Germany F.R.
2. Italy
3. France
4. Netherlands
5. Belgium

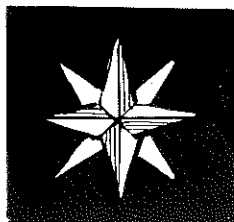
Best goal getter

Van Winsen (HOL)

16 goals

SPRINGBOARD DIVING - PLONGEON DE TREMPIN

1. A. Killat (RFA)	591.65/675.05 pts
2. N. Stajkovic (AUT)	587.85/643.65 pts
3. W. Meyer (RFA)	560.30/580.10 pts



19ème Championnat d'Orientation 19th Orienteering Championship Mont de Marsan (France), 22-28/9/1985

PAYS PARTICIPANTS

13: France, Allemagne R.F., Autriche, Belgique, Danemark, Espagne, Finlande, Irlande, Italie, Norvège, Pays-Bas, Suède, Suisse.

PAYS OBSERVATEURS

3: Cameroun, Canada, Togo.

REPRESENTANT OFFICIEL DU CISM

Lt-Colonel J. Moukori Mbappe (Cameroun)

PRESIDENT DU C.T.P.

Capitaine H. Tschudin (Suisse).

Resultats d'ensemble - Overall results

HOMMES - MEN

CLASSEMENT INDIVIDUEL - INDIVIDUAL CLASSIFICATION

1. U. Fluehmann (SUI)	151.50 pts
2. J. Hansen (DEN)	153.20 pts
3. M. Stappung (SUI)	156.45 pts

CLASSEMENT PAR EQUIPE - TEAM CLASSIFICATION

1. Suisse	624.51 pts
2. Finlande	644.52 pts
3. Suède	668.03 pts

FEMMES - WOMEN

CLASSEMENT INDIVIDUEL - INDIVIDUAL CLASSIFICATION

1. Lebon (BEL)	133.48 pts
2. C. Verdeil (FRA)	149.07 pts
3. E. Mirouze (FRA)	152.25 pts

Resultats par discipline - Results per discipline

HOMMES - MEN

1ère course individuel - 1st individual race

CLASSEMENT INDIVIDUEL - INDIVIDUAL CLASSIFICATION

1. C. Aebersold (SUI)	70.41 pts
2. M. Stappung (SUI)	71.25 pts
3. J. Hansen (DEN)	72.30 pts

CLASSEMENT PAR EQUIPE - TEAM CLASSIFICATION

1. Suisse	287.35 pts
2. Finlande	305.54 pts
3. Suède	315.25 pts

2ème course individuel - 2nd individual race

CLASSEMENT INDIVIDUEL - INDIVIDUAL CLASSIFICATION

1. U. Fluehmann (SUI)	79.10 pts
2. Mattinen (FIN)	79.54 pts
3. J. Hansen (DEN)	80.50 pts

CLASSEMENT PAR EQUIPE - TEAM CLASSIFICATION

1. Suisse	337.16 pts
2. Finlande	338.58 pts
3. Suède	352.38 pts

Course de relais - Relay race

1. Suisse 1 (Stappung, Fluehmann, Aebersold)	127.01 pts
2. Suisse 2 (Buholzer, Duetsch, Hanselmann)	131.57 pts
3. Suède 2 (Nordling, Helgman, Persson)	134.10 pts

Recta Challenge Cup

1. Heiki Pelota (FIN)	54 pts
2. Tore Sagvolden (NOR)	45 pts
3. Kaspar Oettli (SUI)	40 pts

FEMMES - WOMEN

1ère course individuel - 1st individual race

1. Lebon (BEL)	60.34 pts
2. E. Mirouze (FRA)	66.34 pts
3. C. Verdeil (FRA)	70.16 pts

2ème course individuel - 2nd individual race

1. Lebon (BEL)	73.14 pts
2. C. Verdeil (FRA)	78.51 pts
3. D. Hallet (FRA)	80.52 pts

Les athlètes féminines à l'honneur félicitées par le Préfet des Landes, M. P. Bastiani.





**32ème Championnat
de Basketball
32nd Basketball
Championship**

**Dakar (Sénégal),
28/9 - 13/10/1985**

PAYS PARTICIPANTS

13: Sénégal, R.F. d'Allemagne, Belgique, C'ôte d'Ivoire, Emirats Arabes, Etats-Unis, France, Gabon, Guinée, Italie, Mali, Pays-Bas, Syrie.

PAYS OBSERVATEURS

2: Guinée Equatoriale, Surinam.

REPRESENTANT OFFICIEL DU CISM

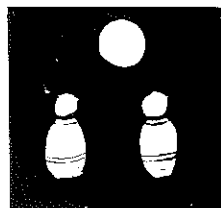
Colonel G.S. K. Scharenberg (RFA).

PRESIDENT DU C.T.P.

Colonel C. Rittman (USA).

RESULTATS - RESULTS

1. Italie
2. Etats-Unis
3. Belgique
4. Sénégal
5. France
6. Syrie
7. Pays-Bas
8. R.F. Allemagne
9. Emirats Arabes
10. Mali
11. Gabon
12. Côte d'Ivoire
13. Guinée



**1st Bowling Tournament
1er Tournoi de Bowling**

Participating countries :

3: France, Germany F.R., United-States.

Observer countries :

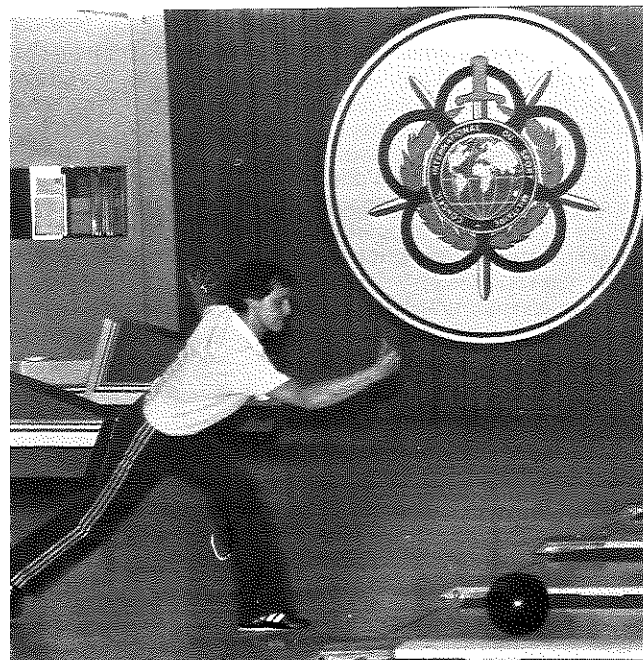
6: Belgium, Italy, Kuwait, Portugal, Switzerland, Thailand.

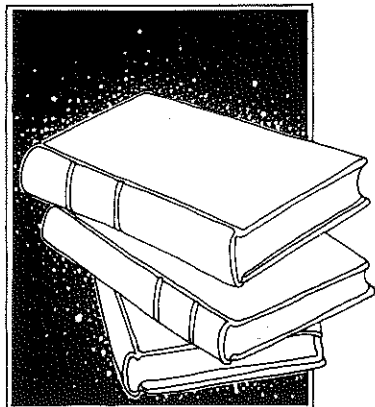
FINAL MEN'S CLASSIFICATION

STS J. Marchette	(USA)
GEF. G. Hinterwimmer	(RFA)
STS. D. Goss	(USA)

FINAL WOMEN'S CLASSIFICATION

1. DP2 L. Mink (USA)	5849
2. ENS L. Barfield (USA)	5320
3. ADC R. Dudde (FRA)	5110





LA FEMME ET LE SPORT D'ENDURANCE

H. Reetz
Condition, 1981, 6:15-16.

Ces dernières années, les sports d'endurance du type long connaissent de plus en plus de succès chez la femme.

Les recherches scientifiques s'orientent toujours plus vers une étude des différences existant entre l'homme et la femme athlète, et entre les femmes de catégories d'âge différentes. Parmi les cinq facteurs qui déterminent la performance (force, vélocité, souplesse, coordination, endurance), l'endurance est le facteur le plus important dans les sports d'endurance. Ensuite vient la coordination qui est meilleure chez la femme que chez l'homme et enfin la force.

L'endurance est déterminée par le système cœur-poumons et par la capacité métabolique. Ainsi, l'absorption d'oxygène e.a. et le volume cardiaque sont plus réduits chez la femme que chez l'homme. En ce qui concerne le poids corporel, cette différence est moins prononcée. La femme possède plus de réserves d'énergie sous forme de graisses que l'homme (25 à 29 % pour 15 à 18 %). Ceci représente un avantage pour les très longues distances (superlongues - 100 km). Les femmes ont également une teneur en acide sébacique moins élevée après des efforts d'endurance.

La femme dispose donc d'une meilleure capacité métabolique et son système cœur-poumons est pratiquement égal à celui de l'homme. C'est pourquoi, à l'avenir, la femme devrait réaliser de meilleures performances sur les très longues distances que l'homme.

Quelques conseils pratiques:

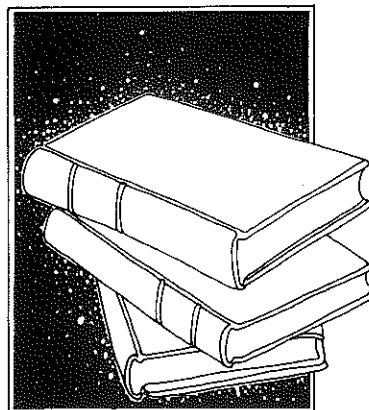
Les sports d'endurance favorisent la circulation sanguine. La combustion des graisses ne commence qu'après 90 minutes.

Un entraînement régulier améliore la silhouette.

En courant lentement mais longtemps, on consomme plus de calories.

Il vaut mieux que les débutants ne courent pas avec un homme. Même non entraîné, un homme court trop vite et cela pourrait les décourager. Après quelque temps, la femme adaptera son équipement: elle remplacera les chaussures de tennis et les jeans par des «shoes» et un survêtement.

Dr. H. Verveacke



MESOTHERAPIE ET TRAUMATOLOGIE SPORTIVE

par J. Le Coz et C. Chos
Editions Masson - 120 bd. St. Germaine; F-75280 Paris
Cedex 06; FRANCE

Les auteurs développent une méthode de traitement de traumatologie sportive qui élimine la répétition de prises médicamenteuses anti-inflammatoires et antalgiques ou qui réduit ces moyens thérapeutiques en quantité.

La mésothérapie est bien supportée grâce à sa faible toxicité; elle permet de déposer le médicament au plus près de l'organe cible.

L'acte mésothérapeutique répond à une codification du mode d'injection des produits à utiliser dans les zones à déterminer. Sont décrits successivement:

- les matériels d'injection (aiguilles courtes de 6 mm): aiguille unique ou multi injecteur;
- les effets pharmacologiques de la mésothérapie;
- les effets dus à la méthode;
- le déroulement des séances de mésothérapie;
- les pathologies et leurs traitements mésothérapeutiques.

Les auteurs démontrent que les fines aiguilles du mésothérapeute permettent de traiter à l'aide de faibles quantités de produits médicamenteux et d'obtenir une action locale et bénéfique.

Médecin Général (c.r.) M. Vrillac

N.B.: une publication complète avec expérimentation scientifique paraîtra dans un prochain numéro de Sport International.

CISM CLUBS

These Clubs are intended for the friends, supporters and athletes of CISM as well as for the former delegates or committee members who wish to keep in touch with CISM and receive information on its activities. Three Clubs have been created for this purpose:

A = CISM SPORTS CLUB for athletes and supporters

PRIVILEGES:

- receive each issue of SPORT INTERNATIONAL
- CISM badge
- receive each year a CISM souvenir-gift
- access to CISM technical brochures & Shop
- new CISM brochure and documentation

Yearly subscription US\$ 15

B = CISM FRIENDSHIP CLUB for delegates and supporters

PRIVILEGES:

- like the Club A members, **plus:**
- access to CISM competitions and events in their country subject to authorization from the organizers
- receive General Assembly programme (if available)
- special invitations and information

Yearly subscription US\$ 30

C = VIP CLUB for VIPS and sponsors

PRIVILEGES:

- like the Club A and B members, **plus:**
- invitation to certain ceremonies during the General Assemblies and possibility to travel at special rates
- receive CISM News
- access to CISM Olympic village
- special page in SPORT INTERNATIONAL with photo and curriculum vitae for new members

Yearly subscription US\$ 100

FRANÇAIS AU RECTO

SUBSCRIPTION FORM

Please return to CISM CLUBS, Box 347, CH-5630 Muri/Switzerland

Name

Function

Full Address

Telephone/Telex

Club A, B or C?

LES LOGOS DU CISM

THE CISM LOGOS

		PENTATHLON MILITAIRE	— MILITARY PENTATHLON
		PENTATHLON MODERNE	— MODERN PENTATHLON
SPORTS MILITAIRES		SEMAINE DE LA MER	— SEA-WEEK
		PENTATHLON NAVAL	— NAVAL PENTATHLON
		P.A.I.M.	— P.A.I.M.
		PENTATHLON AÉRONAUTIQUE INTERNATIONAL MILITAIRE	— INTERNATIONAL MILITARY AERONAUTICAL PENTATHLON
		PARACHUTISME	— PARACHUTING
MILITARY SPORTS		ORIENTATION	— ORIENTEERING
		SEMAINE DU SKI	— SKI-WEEK
		TIR	— SHOOTING
		ATHLÉTISME	— TRACK & FIELD
		AVIRON & KAYAK	— ROWING & KAYAK
SPORTS INDIVIDUELS		CROSS-COUNTRY	— CROSS COUNTRY
		CYCLISME	— CYCLING
		EQUITATION	— HORSEMANSHIP
INDIVIDUAL SPORTS		NATATION	— SWIMMING
		TENNIS	— TENNIS
		HALTÉROPHILIE	— WEIGHTLIFTING
SPORTS de COMBAT		BOXE	— BOXING
		ESCRIME	— FENCING
COMBAT SPORTS		JUDO	— JUDO
		LUTTE	— WRESTLING
		TAEKWONDO	— TAEKWONDO
		BASKETBALL	— BASKETBALL
SPORTS d'ÉQUIPE		VOLLEYBALL	— VOLLEYBALL
		FOOTBALL	— FOOTBALL
TEAM SPORTS		HANDBALL	— HANDBALL
		HOCKEY s/GAZON	— FIELD-HOCKEY

 CALENDRIER 1986 CALENDAR

No	MANIFESTATIONS MONDIALES WORLD EVENTS	PAYS ORGANISATEURS	LIEUX	DATES
1	28eme SEMAINE DU SKI /SKI WEEK	ALLEMAGNE R.F.	RUHPOLDING	24/02-01/03
2	35eme CROSS-COUNTRY	ALGERIE	ALGER	25/02-01/03
3	3eme HANDBALL	ALGERIE	ALGER	07/04-17/04
4	25eme ESCRIME / FENCING	FRANCE	BREST	19/04-26/04
5	28eme SEMAINE DE LA MER / SEA WEEK	BRESIL	RIO DE JANEIRO	01/06-08/06
6	14eme VOLLEYBALL	ETATS-UNIS	COLORADO SPRINGS	01/06-12/06
7	18eme PARACHUTISME / PARACHUTING	MAROC	RABAT	01/07-11/07
8	15eme JUDO	BELGIQUE	BRUXELLES	06/07-15/07
9	38eme BOXE / BOXING	GABON	LIBREVILLE	13/07-23/07
10	26eme TIR / SHOOTING	PORTUGAL	OTA	02/08-10/08
11	34eme PENTATHLON MILITAIRE / MILITARY PENTATHLON	AUTRICHE	WIENER-NEUSTADT	05/08-14/08
12	31eme P.A.I.M.	FINLANDE	TIKKAKOSKI	06/08-13/08
13	20eme PENTATHLON MODERNE / MODERN PENTATHLON	SUEDE	STOCKHOLM	07/09-13/09
14	32eme ATHLETISME / TRACK & FIELD	ITALIE	ROME	10/09-17/09
15	20eme ORIENTATION / ORIENTEERING	SUISSE	CHUR	29/09-05/10
16	6eme EQUITATION / HORSEMANSHIP	ESPAGNE	MADRID	13/10-19/10
17	4eme HOCKEY SUR GAZON / FIELD HOCKEY	PAKISTAN		OCTOBRE
18	33eme BASKETBALL	SYRIE	DAMAS	
19	29eme NATATION /SWIMMING	SYRIE	DAMAS	
20	8eme CYCLISME / CYCLING	SYRIE	DAMAS	
21	13eme LUTTE / WRESTLING	SYRIE	DAMAS	
22	32eme FOOTBALL			01/01-31/12
1	1ere SESSION DU COMITE EXECUTIF	SOUDAN	KHARTOUM	22/02-23/02
4	1eme ASSEMBLEE GENERALE	SOUDAN	KHARTOUM	24/02-02/03
2	2eme SESSION DU COMITE EXECUTIF	JORDANIE	AMMAN-PETRA	OCTOBRE
