

AYUVERDA'S CONTRIBUTION TO SPORTS MEDICINE

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ABSTRACT: Medical Science plays an important role in the field of Sports. Maintenance of fitness throughout the events, heightened physical and mental stamina are the basic needs of sportsmen. Here, the author attempts to find out the ways and means of utilizing the potential of Ayurveda in the field of sports and its original contribution to sports medicine.

In the modern world, medical science has to play many roles in various fields, including the sports. Sports medicine which is almost a new branch of medical science deals with the health of sportsman and sportswoman taking into consideration of his/her specific physical and mental condition, the approach to which is somewhat different from that of a normal human being. The enormous amount of stress, both physical and mental, under which the sportsman has to work is a factor which makes the approach rather unique.

Sports medicine has two goals to achieve. Primarily fitness of the sportsman and second goal is treating the sporting injuries of the sportsman.

The fitness of the sportsman is not merely his healthy condition but it is a state his healthy condition but it is a state of physical and mental endurance to extreme stress. Even though the injuries of any other kind do not distinctly vary from those of sports, the aetiology and line of treatment may have to be considered with different view. Apart from the injuries, extreme fatigue and allied problems also have place in the field of sports medicine.

The present paper intends, in the above context, to identify the possible contributions ayurveda can make to this field of sports medicine. Obviously there is hardly any direct reference in our classics to this effect, though measures like vyayama (exercise), Abhyanga (Massage) and such others are prescribed for healthy living. However, many nonmedical classics refer to the sporting fencing, archery, boxing etc., and naturally Vaidya, medical man used to play an important role for fitness as well as during injury.

Rasayana Therapy

The physical and mental stamina of sportsman indicate perfect health with tridosha and Saptadhatu in their normal condition. However for Dhatupachaya and Balavridhi (Strength) naturally the Rasayana Therapy is most suitable and can be adopted during the training programme. For practical purposes Kuti praveshika (Indoor) type of Rasayana is prescribed. Single Rasayana drug herb or formulation of various such drugs can be prescribed for general health, and specific formulations are indicated by choosing

such Rasayana drugs, which would improve the Mamsadhatu and Snayu (Musculature). They may be selected as per the need and individual condition of the sportsman from the following:- Ashwacandha (*Withania somnifera*), musali (*Asoaragys adscebdebs*), Kakoli, Ksheerini (*Mimusps hexandra*) Bala (*Sida Cardifolia*), vidari (*Pueraria tuberosa*) Kushmanda (*Benineasa hispida*), Shalaparani (*Desmodium gangeticum*), Kharjura (*Phoenix sylvestris*) Amra (*Manzifera indica*), Kadali (*Musa paradisiacal*) and mineral drugs like shilajatu (Bituman) and Abhraka (Mica).

Diet

In the tegimen of diet, Aurvedic foods and food habits are noted and those suitable are adopted. There is a range of meats of fles-eatin animals and otherwise, given by charaka (2200 BC)¹ which are said to be Mamsavardhaka in the treatment of Rajayakshma (tubr-culosos) that may be screened for non-vegetarian food for sportsman.

Vyayama (Exercise)

The training in sports is of prime importance for fitness, and involves physical exercise, which improves the tonicity and strength of muscles and also tones up cardiac and respiratory functions. Obviously our ancient Ayurvedists know of these benefits and have stressed upon regular Vyayama (exercise) not merely as a part of sports but as a daily regimen they also know that apart from many general advantages, Musculature is developed due to Vyayama. Sushrata (100 BC²) and Vagbara (300 AD)³ called it Suvibhaktata and Vibhakta Gatrattvam. Endurance to high amount of stress is indicated by charaka (200 BC)⁴ as Duhkha Sahishnuta and by Vaghhata (300 AD)⁵ as Karma Samarthya i.e. capacity to strain to maximum extent. In fact, strength is a function of Nero-Musculo-Skeletal system and closely related to muscle cross-sectional area. Its development is indispensable for success in sports (T.Relly 1981).

Abhyanga (Massage)

Ayurveda emphasises the role of Abhyanga (Massage) after the tenure of exercise. In fact at the ancient techniques of massage are of great importance in the field of sports. These techniques can be made use of during training period for fitness and as a therapeutic measure after an injury.

Charaka (200 BC)⁷ advises the massage after exercises which would enable the body to endure extreme strain. It reduces fatigue after stress. He further emphasizes that by massage, one gets the power of endurance, if afflicted by injury.

Modern medical science too agrees upon the advantage of massage. Dr. Peter N. Sparryn (1983)⁸ says it may help to drain inflammatory exudates form injuries in the early stages, valarie Steel (1981)⁹ notes that massage and transverse friction Certainly have place. Vertebral and peripheral mobilization and manipulation technique as described by (Mantaland (1977 a & b) and Cyriaz (1977-78) are useful methods of treatment. Connective tissue massage (Ebner 1977) is useful in the management of a person of the soft tissue lesions, seen in sport. It helps in reabsorption of haematoma and stimulates blood flow in the affected parts (Maughan 1981)¹⁰. Some of the Ayurvedic massage techniques are as follows:

- a) Udvartana-Upward and downward movements with oils and dry powders, with the help of palm of hand and also fingers (Sushruta (100 BC)¹¹ and Dalhana)¹².
- b) Udgharshana – more forceful rubbing creating greater friction generally with dry powders. Sushruta (100 BC)¹³ advises Udgharshana with Phenaka (Samudraphena) to strength-then the calf and thigh muscles.
- c) Utsadana-very gentle rubbing especially with medicated oils.
- d) Mardana & Unmardana- Vagbhata (300 AD)¹⁴ advises mardane i.e down ward movements of hands while squeezing the muscles after exercise. Sushruta (100 BC)¹⁵ recommends both Mardana and Unmardadana (Opposite to the former) in Mamsagata Vata.
- e) Samvahana – Gentle tingling massage with oils, which causes a pleasing sense and reduce fatigue. Samvahana helps on regaining the vitality in muscles (Sushruta 100 BC.)¹⁶
- f) Padaghata-Massage with feet to is more vigorous and emphasis In greater pressure and crushing effect. Done only after proper ailation, possibly muscles become more strong and stress resistant.
- g) Peedana and Avapeedana- message in which kneeding of individual muscle is undertaken with the help of knuckles and fingers. Peedana is deep kneeding. One more Pari-peedana is circular kneeding.
- h) Unvestana & Upavesthana-massage applied to the limbs especially over shoulders thighs and waist. Udvestana is upward movement and upavestana the opposite.

Apart from all such techniques many more have been described like Latavestana (Spiral friction), Mandhana (Muscle rolling), Sandhi Chalalana (Joint movements), Samdandshika (Pulling), Harshana (Vibration) Praharshana (Percussion), Chedyam (Hacking) Tadana (Slapping), Samputaka (Boxing), Vadyan (Tapping) Asphalana (Clappin), Marjana (Sweeping) etc., (Lexmipathi,A 1947)¹⁷.

The medicated oils, powders, pastes and such other materials used during massage have potentiality of improving the fitness of the sportsman and obviously have place in injury too.

Swedana-Sudations

Swedakarma (Sudation) therapy too can be of great use in the injury of sports. Many types of sudation techniques have been prescribed in the text, which are once again medicated unlike simple hot packs or fomentation or infrared rays, used by modern Physio-therapists.

Bhagna-Fracture

Fracture is one of the common hazards in sports. Ayurvedic approach to fracture-especially the role of medicinal herbs and minerals, is noteworthy and can become revolutionary in the treatment of sports fracturers. Sushruta (100 BC)¹⁸ and many other classical scholars have dealt with fractures elaborately. He has indicated many herbs like Manjistha (Rubia Cardifolia), Yasthimadhu (Clycyrrhiza Glabra) Rakta (Chandana (Pterocarpus Santalinus), Asthi Shruankhala (Cissus quadrangularis), Guggulu (Balsemodendron mukul) which will help in acceleration of cllus

formation. The drugs noted in Sandhaneeya group by Charaka (200 BC)¹⁹ too may be considered. Sushruta (100 BC)²⁰ have prescribed Bhagna-Sandhanaka taila and similar other oils obviously medicated, can also be tried. Shilatiji (Bitumen) is important among minerals.

Approaching this problem of fracture with more integrated way-using modern mechanical processes and devices as well as Ayurvedic Medico-mechanical measures would be more fruitful and result yielding.

The medication to the sportsman during illness, injuries and such other conditions should be observed critically, for modern medicines like anti-inflammatories, analgesics, antibiotics, barbiturates are gradually proving toxic and naturally affect the fitness of the sportsman. Hence a possible switch over to Ayurvedic medicines which are least toxic, can be thought of.

In the competitive world of sports on international level Ayurveda can help Indian sportsman to improve upon their total performance. The integrated approach assistance of modern technological development and incorporation of Ayurvedic measures, both in fitness as well as in therapeutic level, would be highly beneficial. Such possibilities need a thorough indepth study.

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