

Mount Carmel College, Autonomous, Bengaluru

II MSc Food Science and Nutrition

Report on National e Workshop- Dynamic Facets of Sports Nutrition: Meeting the Challenges

- **Date:** 29/09/2020
- **Sessions-** 3
- **Time:** 3:00 – 4:00 pm
- **Resource persons:**

1. **Dr. Kiran Kulkarni-** MBBS, Diploma in Sports Medicine. He is also a Medical and Doping officer at FIFA and Asian Football Confederation. Doping Control Officer at BCCI and IDTM. He is also a former National team doctor at Senior and under 23 National Football (AIFF), Women Hockey, M & W Gymnastics. Joint Secretary at Indian Society of Sports and Exercise Medicine (ISSEM). He was also a Past EC Member of Indian Association of Sports Medicine (IASM) and Indian Federation of Sports Medicine (IFSM).

Topic: Awareness and engagement with Antidoping education.

2. **Mrs. Kunda Mahajan** -consultant, Sports Nutritionist, and President at Khel Rang FSSA.

Topic: Techniques in Fitness assessment: Key to performance.

3. **Dr. K.A Thiagarajan** – Associate professor, Department of Arthroscopy and sports medicine, SRMC

Topic – Sports Biomechanics for Performance and Injury Prevention

➤ **Learning outcomes:**

❖ **From Session 1-**

- The relevance of Sports Medicine, and branches of Sports Medicine where Sports Nutrition and Sports Pharmacology and Doping were more emphasized.
- A generalized definition of drug. Classification of drugs like: for treatment and cure of patients, preventing deficiencies, diagnosis of disease, recreational, sports drugs and wellbeing drugs.
- Doping and its activities and important statistics stating that back in 2014, India was the 3rd largest offender in doping after Russia and Italy.
- Importance of Doping in sports was highlighted along with various testes done by NADA (National Anti-Doping Agency). Various Elite athletes who committed Doping were also mentioned and then the reason behind Doping is committed was also highlighted.
- Different group of Doping substances were also mentioned, where anabolic steroids, beta antagonist, masking agents, diuretics, stimulants and glucocorticosteroids were commonly used. Ill effects of these doping agents were also

mentioned and an example of an Athlete named Heide Krieger was also mentioned who had undergone sex-change operation due to doping.

- Prohibited methods like enhancement of oxygen transfer, chemical and physical manipulation and gene doping were also talked about.
- Nutrition supplements use. Various In Competition, Out Competition and Target Doping tests.
- The important five phases of Doping Control. Ber Linger Dope Kit and its significance.
- Finally, the session ended with a very powerful line that is say, “NOPE TO DOPE”.

❖ **From Session 2-**

- An introduction about physical fitness, and its necessity for athletes and common people.
- The five types of health related assessment were discussed which were Cardiovascular endurance, Muscular endurance, Muscular strength, Body composition and Flexibility. Few examples of these tests were also given which were Queen test and Beep test which were most common for measurement of Cardiovascular endurance. For Muscular endurance Core stability, Curl up test and Handgrip dynamometer were the most common ones.
- In relation to Body composition various aspects like height, girth, weight, skin fold measurement, bioelectric impedance and dual- energy X-ray absorptiometry (DEXA) were the most widely assessed in athletes. For Flexibility Sit and Reach Box test and V- test were most common ones.
- Skill Related Fitness Assessment test. In this topic various tests for determining Power, Agility, Speed, Coordination, Balance and Reaction time were mentioned for all kinds of sports.
- Lastly, a few guidelines were also mentioned about considering these fitness assessment tests.
- The take home message from this session was, assessment is the key to fitness, all components are necessary for daily physical activity and to excel in a particular sport one must get its sports specific components assessed.”
- Videos on Cardiovascular endurance test, Abdominal Curl up test, Body strength test were very informative.

❖ **From Session 3 –**

- CSS - Centre for Sports Science, which is one of the first sports science centers, recognized by the government, tied up with other organizations like SRMC. It is also accredited as a Centre of excellence by Sports Authority of India, Centre of International Cricket and AFC.
- Few of the parameters performed by CSS are biomechanics testing, exercise physiology testing, fitness training with the supervision of foreign trainers. Lab and field tests are done along with functional ways of training the athletes.

- To understand the importance of biomechanics; that Athletes can biomechanically test and train well to improve their fitness aspects. This can be done in the Biomechanics lab which has 3D and 2D cameras with the latest equipment and software to do the testing.
- Biomechanics helps in various sports, the equipment allows them simultaneously test the biomechanics of the bowling and batting of cricket players, force plate, radar - equipment in the lab and pitch vision to track the ball force.
- Biomechanics analysis of tennis analysis the posture of the player while serving - 3D as well as 2D analysis is performed. Similarly, for Football biomechanics - position, motor force and other aspects are assessed.
- CSS also have a program known as Performance Enhancement Program which aims for the athlete to gain speed and reduce injury on the water and the ergometer.
- To conclude, through biomechanics performance can be enhanced and injuries can be prevented through access to good labs and experience technicians.



MOUNT CARMEL COLLEGE, AUTONOMOUS, BENGALURU
DEPARTMENT OF NUTRITION & DIETETICS
In Association with
DEPARTMENT OF FOOD PROCESSING AND ENGINEERING,
ST. ALOYSIUS COLLEGE (AUTONOMOUS), MANGALURU



Celebrates National Nutrition Month 2020
National E-Workshop
DYNAMIC FACETS OF SPORTS NUTRITION: MEETING THE CHALLENGES
September 29 – 30, 2020

Patron: Dr. Sr. Arpana, Principal, Mount Carmel College, Autonomous, Bengaluru

September 29, 2020



Awareness and Engagement with Anti Doping Education
11:00 am - 12:00 noon
Dr. Kiran Kumar Kulkarni
Sports Medicine, Exercise, Fitness & Rehabilitation Consultant, Medical and Doping Control Officer, Asian Football Association



Sports Biomechanics for Performance and Injury Prevention
2:00 - 3:00 pm
Dr. K.A. Thiagarajan
Associate Professor
Dept. of Arthroscopy & Sports Medicine, SRMC



Techniques in Fitness Assessment: Key to Performance
3:00-4:00pm
Ms. Kunda Mahajan
Consultant Sports Nutritionist
President, Khel Rang

September 30, 2020



Role of a Nutritionist in Sports, right from Grassroot to High Performance
10:00 - 11:00am
Ms. Aradhana Sharma
Senior Sports Nutritionist, Directorate of Sports and Youth Welfare, MP



Load Monitoring in Sports and Overtraining Syndrome
11:00 - 12:00 noon
Dr. Bharath Kumar B
Sports Medicine Specialist, Sports Authority of India



Emerging Nutritional and their role in Health Supplements and their usage by Consumers
2:00 - 3:00 pm
Dr. D.R.A. Narayana
Chief Scientific Officer
AYURVIDYA TRUST



Nutrition Counselling for Optimum Performance - Challenges & Opportunities
3:00 - 4:00 pm
Ms. Apurva Surve
Sports Nutritionist, Sports Authority of India

Convenor: Dr. Sangeeta Pandey, HoD, Dept. of Nutrition & Dietetics, Mount Carmel College, Autonomous
Co-convenor: Dr. Adarsha Gowda, Dept. of Food Processing and Engineering, St. Aloysius College

REGISTRATION
Free but mandatory [Click here](#) to register
Register before
5:00 pm September 28, 2020

Workshop link will be shared with the registered participants.
E-certificates will be provided.

Conference details and speaker's information

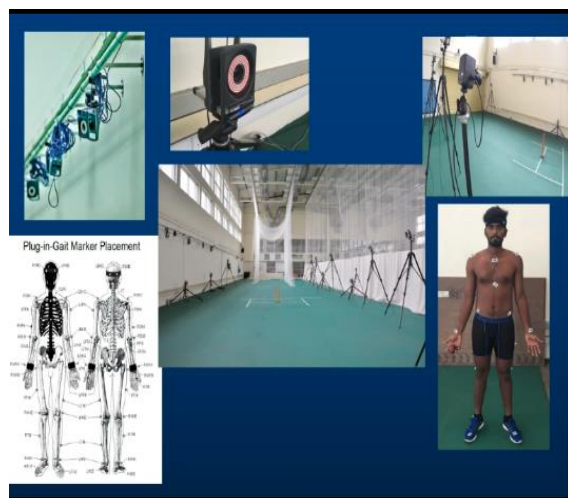


Harmful effects and body transformation from Gene doping.

TEST FOR CARDIOVASCULAR ENDURANCE- BEEP TEST



Students practicing Beep test.



The Biomechanics lab at CSS



Training and infrastructure

- **Date:** 30/09/2020
- **Sessions-** 1 and 2
- **Time:** 9:00 to 11:00 pm

Resource persons

- ❖ Ms. Aradhana Sharma, Senior Sports Nutritionist, Directorate of Sports and Youth Welfare, MP
- ❖ Dr. Bharath Kumar B, Sports medicine specialist.

Session 1: Role of a Nutritionist in Sports, right from Grass root to High Performance by Ms. Aradhana Sharma

Learning outcomes:

- The role of a sports nutritionist is not just limited to diet counseling but also includes guidance for recovery, fluid replenishment plans, optimal body composition achievement by an athlete etc.
- Factors like age, social background, gender, personal preferences etc. must all be kept in mind while planning meals for an athlete. Young athletes should be taught about food groups, the 'my plate' concept, importance of physical exercise etc. Families of the athletes must be encouraged to make better food choices.
- Guidance to the athletes about good nutrition and health should be provided at the grass root level because that is when good habits are formed that help achieve long term health and performance goals
- It is very important for Indian athletes to consult nutritionists due to reasons like regional diet variations, coming from rural backgrounds, lack of awareness about balanced diet and a few traditional diet related beliefs. In order to overcome such issues, athletes must take help from nutritionists.

Session 2: Load Monitoring in Sports and Overtraining Syndrome by Dr. Bharath Kumar B

Learning outcomes

- Overtraining syndrome, the causes and difference between overtraining and overreaching along with the various supramaximal adaptations which take place with training and stressed on the importance of recovery after training and consequences of overtraining
- The role of sympathetic and parasympathetic system and how they are involved in training and symptoms of overtraining syndrome such as bradycardia, irritability, hypertension, loss of appetite, stiff and sore muscles and loss of motivation and the changes testosterone, creatine kinase and insulin
- Ways to prevent and avoid overtraining syndrome with the help of a physician or coach and the importance of sleep, stress reduction and adaptive training. Importance of nutritional evaluation stressing on micronutrients and how a fasting window aids in recovery.
- Load monitoring in athletes and the differences in internal and external loads among athletes and methods to calculate the acute weight load of athletes by the use of a rating scale.

➤ **Date:** 30/09/2020

➤ **Sessions-** 3 and 4

➤ **Time:** 2:00 to 4:00 pm

➤ **Resource persons:**

4. Dr D.B Ananta Narayana – Chief Executive Officer, Ayurvedic trust, Bengaluru.

Topic: Emerging Nutritional's and their role in Health Supplements and their usage by the consumers.

5. Apurva Surve- Sports Nutritionist, Sports Authority of India.

Topic: Nutrition Counselling for Optimum Performance- Challenges & opportunities.

➤ **Learning outcomes:**

❖ **From Session 3 -**

- The major difference between the nutrients and nutritional's. Nutrients include the micro and macronutrients. Nutritional's are group of chemical compounds that are present in the foods, beverages that have various health benefits.
- To learn about the some of the common nutritional's such as polyphenols, turmeric (curcuminoids), ginger (gingerols and shagols).
- Polyphenols has various health benefits such as metabolism enhancer (catechins), mood elevator/calming (the arubigins and theaflavins), gut health, sleep promoter.
- Curcuminoids aids in immunity enhancer, anti-inflammatory, prevent arthritis, memory enhancer. Ginger serves as an anti-inflammatory, anti-nauseate analgesic, anti-diabetic, bio-availability enhancer.
- To understand the importance of reading the labels, checking for the information and consulting the health professionals before buying because few of the nutritional's work through hormonal route in the body.

❖ **From Session 4-**

- To learn nutrition counselling-an optimal part for an athlete's diet NOW and in FUTURE.
- To learn about different opportunities where nutritionist should collaborate with other people in the team for the yearly nutrition plan and to use social media as a platform in a constructive way to deliver the right information through blogs, tie-ups with academies.
- To document the work which can be used to show to the sports administrators to develop funds and schemes.

Poly Phenols

- ▶ Most common Nutritional, Widely studied
- ▶ Gallic acid, Catechins, Epi Gallo Catechins, EGCG, Theanine, Theaflavins, Thearubigins, etc.
- ▶ Not just from tea, but a number of other vegetables and fruits.
- ▶ Hugely studied and scientifically shown and proven for benefits.
- ▶ Anti bacterial, anti-oxidant, immunity enhancer, metabolism enhancer, (weight management) mood elevator/calming, gut health, oral cavity benefits, promoter of sleep, micro circulation enhancer.

Benefits and Sources of Polyphenols

What can a Sports Nutritionist do for you?



An athlete's diet will affect his/her health and physical performance

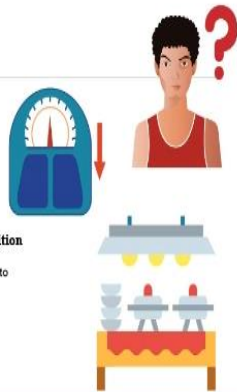
NOW, and in the FUTURE.

Nutritional counselling is important for athletes!

Role of Sports Nutritionist for Athletes

Challenges

- ▶ **Dietary extremities & mental rigidity**
 - Dehydration techniques, drastic weight loss
- ▶ **Long term intervention**
- ▶ **Different situations during training & competition**
 - Different food at events, non-availability of nutritionist to guide



Challenges faced by Sports Nutritionist

Use of Social/Digital Media

- ▶ Reach broader audiences and connect directly with the public
- ▶ Effective tool for virtual nutrition counseling, patient education, peer-to-peer support, and public health campaigns
- ▶ Ethical & Professionalism should be maintained
- ▶ Counselling software can be used for better tracking



Benefits of using Social media for Counselling.

Janet Hehn, Megan Miller Jones, Practice Paper of the Academy of Nutrition and Dietetics: Social Media and the Dietetics Profession: Opportunities, Challenges, and Best Practices, Journal of the Academy of Nutrition and Dietetics, Volume 116, Issue 11, 2016, Pages 1822-18