

## **Sports And Performance Nutrition**

**Prof: Geetha Ghaliyavar**

**Department of Sports Nutrition**

**IIT Madras**

**Week-08**

### **Lecture-40: Food psychology**

A warm hello to all. In this lecture, we are going to be discussing food psychology and how that can be important in sports nutrition. There are several factors that influence food choices in athletes among the biological or the physiological apart the biological or the physiological parameters that can influence food intake psychological and emotions also have an equal importance in the way we change our approach towards food. So as sports nutritionist and dieticians inculcating sustainable habits and building positive food relationship is the focus. Let's understand more. Food psychology is the behavior towards food.

The food that we consume can vary each day and within the day. So you can imagine how many many parameters can be the deciding factor for the meals that we eat. And if you recollect the chapter where we discussed the literacy or our belief system and cognition which can also change our approach to food. In the ideal scenario consuming well-planned balanced meals including all food groups particularly vegetables which often seem to get left out is the best possible way for an athlete to take care of the nutrient need.

Simple home cooked meals can offer the best nourishment and is obviously the most healthy but consuming balanced home cooked meals may not always be the option particularly if the athlete is traveling to the academy or if the athlete is also in a tournament. A full plated meal with dals which give protein to rice roti which give carbohydrate or a couple of servings of cooked vegetables local and seasonal may not always be practical. So does that derail an athlete's approach to his athletic goals when he is unable to consume balanced meals from consuming a chat or a samosa to even a jamun or ice cream. The benefits can be under immense pressure and be faced with guilt for consuming calorie dense meal options or dishes. Some of these that I mentioned offer plenty of calories and some unfavorable nutrients be it heavy cream or trans fats and may lack the nutrient density of what a dark green leafy vegetable or a protein rich meal can offer.

But labeling a food as good or bad can lead to incorrect perceptions about food itself. We also need to be cognizant of small joys of relishing food which can release neurotransmitters as endorphins which makes one feel happy. One of the strong influencing factor the way we eat is our emotions. Under the umbrella of the psychological parameters athletes can go off the track if they are under stress either due to exams or even sports performance anxiety around competition. So sustained support through educating them with consuming voluminous food which may be nutrient dense but offers lesser calories can support them in making these decisions.

To give an example if an athlete is tapering before a tournament consuming well planned meals particularly like soups or salads as they are not training as much can help keep the calorie intake low. So, the education process can equip them to make better informed decisions and

as the psychology goes childhood taste the family culture and traditions are a very very integral part of the food belief system and that can be the deciding factor also the way food is consumed. Motivated athletes will prioritize nutrient intake to support performance when the objective is performance and a motivated athlete will stay aligned to the meal plans suggested. However mood and emotions can change and these dynamic changes can pose a challenge to healthier eating habits. In adolescence or young adults nutrition needs are also catered for growth in addition to performance and yes hunger is a very strong biological cue and athletes have a higher training load and burn a lot more calories unlike a sedentary individual and hence their need for food can be triggered by hunger in periods of higher training load.

There are some individuals who address stress by consuming food. Unfortunately this is not the ideal practice coping with food can be swapped with going out for a walk or calling a friend who can be a sounding board or any other technique that one can adapt to lower stress. In female athletes due to the changing hormones there can be some triggers or food cravings. As females are nearing their menstrual cycle there is low serotonin and serotonin is a feel good hormone or a neurotransmitter. This by default can make females have a desire to consume high carbohydrate meals or have a sugar craving.

We now know that athletes in peak season have higher need for food consumption based on their training load and intensity. Another important aspect that determines food intake is the social cultural setting. So, with festivity in the air and especially with cold weather during winter with shorter days and need for warmth there is, but a higher need to consume extra food and with festivities this can get further exaggerated. Also in athletes like I have mentioned earlier, family of foods can be a comfort zone and childhood habits can predetermine your food intake. Apart the athletic needs, likes dislikes and strong food preferences one important aspect that determines the food choice is the availability of money or access and at times when the athlete may not have had the time to plan the meals and if a family member is not around to support them convenience takes priority over cumbersome situation.

Ready to eat food or fast food can be the go to option as limited cooking skills can be a challenge. In some conditions and we have touched upon anorexia or bulimia as a eating disorder in a few other chapters where there is a lot of pressure to maintain the body weight especially if you are in aesthetic sports as an equestrian a gymnast or are participating in combat sports and you need to fit in a certain weight category. So, in these eating disorders as anorexia and bulimia the eating habits can get challenged further and can compromise adequate intake of food and nutrients. Anorexia and bulimia need psychological intervention other than working with a sports nutritionist or a dietician. Working with the sports science team and monitoring the athletes progress can ensure the overall well-being.

Several factors can underpin body image perception and influence athletes nutrition. In prolonged exercise time and elevated cortisol lowers appetite high training load also uses up B vitamins particularly B12 and magnesium. Similarly if it is a young or a master athlete who consumes alcohol these minerals and vitamins along with zinc can be lowered. An athlete who is under pressure and cannot have clear thinking can be unnecessarily influenced by negative aspects and can adopt unhealthy coping strategies. An athlete who is already training to improve his performance or a fitness enthusiast who hits the gym regularly or plays a sports for enjoyment has exercise induced inflammation a bit of inflammation response by the body is useful to enhance training adaptations.

Chronic inflammation along with the psychological aspects can increase the turnover of nutrients as we discussed in the previous slides. Vitamin D and omega-3 fatty acids have a very strong function or a role to play in cognition and brain function. We have discussed at length regarding the role of these nutrients in the respective chapter. So adequate intake of these nutrients can help lower stress thereby improving health status by consuming foods which are rich in probiotics which is the live bacteria or certain prebiotic fibers where the gut bacteria will ferment is very useful for one's well-being and if you remember serotonin is a neurotransmitter which improves brain function and most of it or 90% is synthesized and manufactured in the gut and we have discussed how the gut has a connect with the brain and that is known as the gut brain axis or the gut to the lung axis gut to skin and similarly our microbiome or the microbiota which is the gut bacteria has a strong influence on weight and appetite management. So consuming prebiotic fibers and probiotic rich foods such as curd or pickles can improve the good bacteria in the gastrointestinal tract.

Consuming adequate carbohydrates also improves serotonin and protein rich foods help in improving tryptophan which is a precursor of serotonin. So well planned balance means ensure not only health but can help cope with stress. Each of us would have had an experience with travel as much as travel can be fun it does put forth some challenges and that can throw you off your routine and push you away from your comfort zone and you can imagine if it's an athlete who's in a peak competition season and has back-to-back travel particularly outstation and not to a local academy or even an international travel and we have discussed this in detail in one chapter. Sticking and adhering to a meal plan and the inability to access familiar comfort foods can add additional stress to an athlete. So planning training and recovery meals and ensuring a surplus can help avoid these situations and if it is travel against time zones jet lag can make food consumption even more difficult.

Acclimation and getting used to the local time and eating meals as per the local time can take a couple of days to settle down. Athletes can be mindful about their eating habits and be intuitive to the hunger sensation and also the feeling of fullness of when the satiety sets in. Consuming large portions or indulging in extra food can make an athlete sluggish and taught his performance. To be aware and enjoy meals consuming adequate portions can ease the digestion process and yes definitely improve the palatability when your taste buds are able to perceive the taste of the food when you are most hungry and I trust each of you who is listening to this lecture would not agree with me more. As practicing sports nutritionists and dietitians and academicians our forte is to bring forth scientific knowledge and educate the athlete community to ensure that they have a flexible approach to food consumption.

The focus on what is being done predominantly overall lion's share of the suggested pattern is more important than a one odd sporadic case of overeating or not eating a certain meal with a specified food group. The psychological approach and the belief system of an athlete towards food can have a very strong hold on food acceptance. Introducing newer foods due to their performance benefits can take some time and a few trials for the athlete to develop a liking towards that particular ingredient or the fruit or vegetable also for those athletes who are used to food as a reward system guiding them to steer clear from food and enjoy a walk in nature or to perhaps purchase a gadget which they wanted to as a reward for winning a competition can be a shift that can take some time. As sports science professionals each of us needs to speak the same language and reinforce this aspect which can influence the food psychology. One way we can bring about this behavior change among athletes while offering science based

dietary suggestions to have a discussion in the consultation and to probe to understand the psyche of the athlete and have them involved in their goal setting which can help them to be open towards embracing newer practices.

Behavioral change is a slow process working on food cues can help athletes change their food habits one step at a time buying less quantity consuming meals which are portioned in smaller amounts placing the food where you do not have easy access perhaps the dining table and keeping it farther away in a counter which is not easy to access can be some cues that can improve and build better eating habits especially when it comes to unhealthy or unfavorable nutrients while a dietician or a sports nutritionist will be very transparent in the communication doing that with empathy helping build trust with the athlete and having that rapport in due course of time can encourage athletes to get rid of their barriers and be open to trying newer food choices can help athletes be less apprehensive hold less resistance and be open to trying or experimenting the new foods and in some cases when we see red flags and as a practicing sports dietician or a nutritionist we may want to have a referral to a sports psychologist who are equipped with techniques that can bring about behavioral change with this integration we can change the attitudes towards food by embracing the right approach of psychology. To summarize understanding factors which influence athletes food choices can help sports nutritionists and dieticians to improve meal adaptation offering actionable suggestions can help athletes to adopt sustainable food habits fostering flexible dietary approaches inculcates a positive relationship with food among athletes I hope some of these helped you in your own experience or if you're a support staff or a sports science professional who works with athletes or individuals these techniques can be useful for you in situations where you want to interact and improve the rapport with an athlete thank you for listening and I hope this lecture has been helpful.

Hello everyone I am Priyanka I am a sports psychologist and on being asked about the relationship between sports psychology and sports nutrition I hope that let me address it at three different levels you know the first is what is the relationship between sports psychology and sports nutrition you know we all have heard this very famous quote which says that you know who are what you eat and to a very large extent the research studies also have shown that what we eat has a huge impact on the feelings and the emotions we feel and the kind of energy levels that we have throughout the day there is enough research evidence which speaks about the fact that when we eat healthy food you know we also feel happier, energetic, we are able to make better decisions, are able to reason better and also problem solve better which is extremely important especially when it comes to the field of sports and high performance and apart from that there is also enough evidence which speaks about the fact that when we eat junk food you know we may feel angry, frustrated and irritated and low on energy and may feel lethargic alright. So this is something that I thought let me begin with especially when we are talking about the relationship between food and its impact on the mental health and second is that you know how do sports psychologists and sports nutritionists work together. I would definitely say that you know sports psychologists and sports nutritionists are part of the same sports science team so especially there are times where athletes who are my clients would probably come to me and talk to me about how they are feeling physically and mentally fatigued rather than jumping into the psychological strategies I also would like to rule out if there are any you know nutritional deficiencies which they are actually undergoing and here we work together as sports psychologists and sports nutritionists and the other important area

where we work together is when it comes to you know athletes especially in weight category sport they end up going on crash diets especially to reach their you know particular weight right before the competition.

Here I think what becomes important is that when people go on their crash diet in bags their body is not really getting the relevant nutrients which are important to keep the body active during the competition. So here we really focus on educating the athlete both psychologically and nutritionally so we work hand in hand and the third other area which we work is with respect to clinical sports nutritionists when there are athletes with respect to eating disorders all right and now the third level at which I would like to answer some of the question is by talking about some of these psychological strategies which could be used by people when it comes to managing the weight. I think we all you know would want to consistently be at a particular weight especially by following a nutritional regimen which is there but athletes are for the general population correct and what is also important is we being disciplined consistent and also following the process. One of the things which we also need to realize is that the process is not something which are not filled with setbacks. One of the ways in which sports psychologists really motivate the athlete is by setting them helping them set realistic goals you know and also helping them set goals within a particular time frame.

So and another important dimension when it comes to goal setting is with respect to understanding what is it about this particular goal which makes it so important for the athlete. Where is the motivation coming from? Is it coming from the self? Is it coming from the environment? Is it coming from the family pressure? Is it coming from you know coaches? What is it and what is the benefit of attaining a particular weight? What is the whole value that the athlete gets? Is it physical desirability, social desirability? Is it you know wanting to maintain a health in a certain way or wanting to you know have a better performance in a certain way? What is it? So understanding that really helps us motivate and set goals for the athlete better and like I said I think having a time frame is so important because otherwise we are going all over the place and we never start with respect to eating the right quantity and the right kind of food which is important for the performance. And some of the other strategies which are also helpful and beneficial are you know taking responsibility and accountability. I think the athlete can be responsible for his or her weight loss journey or weight management journey and at the same time working with the professional also gives in a sense of responsibility and accountability. And sometimes also as a consultant sports psychologist I have noticed that you know athletes' language when they say that you know I can't do this anymore.

I don't think I have this in me anymore. I think those things also speaks to us a lot about athletes wanting to fall back on the old patterns and not really wanting to move back and you know embrace the new. So here I think we use a lot in terms of how can they start working towards embracing the new. You know what is the language that they can use in order to change their limiting beliefs and achieve what they really want. So these are some of the psychological strategies which we definitely use and apart from this of course you know helping the athlete receive the necessary social support you know really rewarding them whenever it is necessary also becomes extremely important.

And with this I think I have spoken to you all about the relationship between the nutrition and sports psychology.