Sports And Performance Nutrition

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Week-01

Lecture-05: Myths around carbohydrates

I hope my elaborate lecture on carbohydrates has helped you to understand several concepts and perhaps you on your own now are able to arrive at some conclusions around several carbohydrate myths. But I wanted to take some time to just go over a few misconceptions which I am typically asked in my practice. Athletes have several apprehensions, support group such as parents to coaches also have several myths around carbohydrate. Let us take each of them and just go over what this could mean for an athlete. To just name a few the gluten free diet. Athletes often ask me should they attempt gluten free diets? Should they practice intermittent fasting? What about low carbohydrate and high fat diets? I have seen several athletes who do not consume white rice at all.

Similarly they steer clear from bread. I know professional athletes who come no way near sugar but are their practices validated? Let us see. What is gluten? It is a protein found in wheat, not just in wheat oats, rye, barley. Some grains also contain this wheat protein called gluten.

Those with this medical condition who cannot handle gluten because they are genuinely intolerant to it can benefit by avoiding the consumption of these grains which contain gluten. And honestly it is a medical requirement. So should athletes follow gluten free diets? Gluten free diets can be extremely restrictive. The only alternative option to avoiding wheat and wheat products can be rice, quinoa, millets and gluten is found not just in roti or bread but all the processed foods from the bakery items, the biscuits to other hidden sources of wheat that can be used in several food technology options. If you avoid gluten and gluten containing grains the only other option leaves you with rice, millets and other pseudo grains is quinoa.

So these meals can be very restrictive. All gluten free products also come at a very expensive price. So for an athlete who is not gluten intolerant following gluten free diets is absolutely unnecessary. And if you think you have bloating or you are sensitive to gluten there is a way to find out. The gastroenterologist will prescribe you a genetic test and that can be the gold standard to determine if you are gluten intolerant.

So just don't go by hearsay and practice some evidence based approaches. Should athletes follow a low carbohydrate and a high fat diet? They have already learnt that carbohydrates fuel exercise. So for an athlete to consume as little as even 50 grams of carbohydrate for an entire day can be a very cumbersome effort. 50 grams of carbohydrate is equivalent to approximately eating just about 3 chapatis for a full day and through conclusive research studies we know today that low carbohydrate diets thwart the performance and lower the

exercise capacity for an athlete. So for those athletes who are looking to transform their body, lower their fat percentage or lower their body weight can periodize some fasted workouts around lower intensity exercise sessions and perhaps look at increasing the carbohydrate intake on the days when they have an intense cardio session or perhaps even longer workouts for endurance activity.

Also lowering carbohydrate and increased amount of fat consumption can lead to certain deviations of your lipids called the dyslipidemia and on long term we don't know what these implications can be. So it is best for athletes to choose high carbohydrate meals for training days and choose low carbohydrate meals perhaps for a non-training day. There is another approach to consuming minimally processed food. So the raw food diet becomes very popular where a major chunk of your intake is fresh produce such as fruit vegetables from raw pulses like sprouts to sometimes even just sprouted grains. I've been asked is it a good idea to consume minimally processed and only fresh produce and that could include fresh produce such as your fruits vegetables, sprouts or even just raw grains.

Well for an athlete this can be challenging. The high fiber content can slow down the whole digestion process and besides there are certain nutrient-nutrient interactions. So these anti-nutritional properties be it the phytates or the trypsin inhibitors or the oxalates typically found in high consumption of these unprocessed foods can lower the absorption of iron calcium and even magnesium. So it is best to balance these kind of raw food choices for a rest day and consume regular meals that can support training. Is sugar bad? The cane sugar which is commercially sold is of course highly processed.

Excessive consumption of sugar for a non-athletic population who leads a sedentary lifestyle like somebody like me who perhaps may spend a lot of time just sitting. Excessive consumption of sugar over 30 grams per day is unnecessary and it can lower the absorption of vitamin D and vitamin C. Both these nutrients are extremely important for immune function. But what could this mean for the athletic population? Athletes require anywhere from 30 grams of carbohydrate each hour all the way up to 90 or even 120 sometimes based on the number of hours of workout and about 30 grams of carbohydrate can be got even by eating a large banana which can be approximately 25 grams of carbohydrate. But in athletes like marathon runners if a runner had to consume 2 or 3 bananas during the run there is gastric distress and an urge to use the washroom.

So it may not be practical and marathon runners have to sustain their training to running a marathon anywhere between 3 to 5 hours. Similarly in the athletic training athletes can train to a minimum of 2 to 3 hours in one session in that scenario consuming any form of a sweetener be it the palm jaggery, jaggery, honey and even sugar and of course maltodextrin when mixed to make a 6 to 8 percent isotonic solution can be very safe and consume in the training time. Athletes ask me can they adapt to intermittent fasting? We know now by some research data for those with metabolic syndrome or the ones who are trying to lower the body weight prolonged periods of fasting 14 to 16 hours can improve their blood sugar parameters, lower their cholesterol and health weight loss provided they also genuinely restrict the calorie intake and consume less food. And in my opinion even an athlete or any individual if can be disciplined about their food intake and address manipulation of food groups even while consuming normal meals through the day can still look at lowering body weight and improve the other blood parameters if they can look at a training schedule which involves not just

walking or running but also look at resistance workout and can definitely be in calorie deficit. So the best recommendation is to obviously maintain 10 to 12 hours of fast which follows the day and night cycle.

This particularly also can be challenging for an athlete who has very early hours of training or many times can have very late evening training also. So for those athletes consuming meals immediately after the training can improve the recovery of their glycogen and the intermittent fasting may not be sustainable for them because they can get very fatigued and that can lower the training or their performance. A question I am asked often should the juice or the detox diet be followed? It is a good idea sometimes to give your digestive system rest but what the detox diet does is apart suggesting just the intake of liquid options it cuts out the major food groups. The calorie intake is so low it can be as low as 800 calories or lesser than 1200 calories and what we call that as the VLCD or the very low calorie diet. These are very difficult to sustain and may not be advisable for anyone to follow for more than 1 or 2 days and more so if an athlete has a priority to look at optimal training this definitely does not suit their requirement.

White rice receives a bad rap. For a healthy individual consuming 50% of the grains as whole grains meaning the unpolished grains from the unpolished rice varieties as the rajmudi or the hand pounded rice from ragi to several other traditional choices is a good option. They offer fiber and satiety. On many occasions I have also been asked if choosing an organic variety of a brown rice is even better and the answer is it really depends on the individual as to why they want to consume an unpolished grain. Even an organic variety of a brown rice can hold arsenic.

In fact you will be surprised that white rice is not only the best option for an athlete to give a quick energy prior to training and white rice thus is a better option. Should athletes practice fasted workouts particularly after an overnight fast when the liver glycogen can be lowered very fast. Exact workouts can help an individual go into the fat burning zone faster but on some occasions training low may not optimize that particular training session due to the lower capacity to exercise. For those athletes who are looking for these kind of training adaptations it is best to couple the fasted workouts around the lower intensity training sessions or perhaps even a modest effort of a gym training. Can we avoid eating carbohydrate foods after sunset but that also depends if the athlete is having a training session around evening.

If an athlete has had an intense session it may be helpful for him to consume some carbohydrate immediately after his workout. And so if he has another early morning session next day not consuming any carbohydrate after a training session can also help incorporate the train low concept of deliberately avoiding the carbohydrates to lower the fat percentage and this is a good option to try in off season. When you are looking to optimize certain training adaptations. I would love to hear your thoughts on some of these topics and if you would have any queries please do leave a message on the forum and we can take the discussion forward. Hi guys I am Aditi Mutharkar and I am a former international badminton player.

I have played badminton for almost 16 odd years. I am here to quickly talk about fat diets things like intermittent fasting, Keto diet you hear so many things going on gluten free diets and stuff like that. I just wanted to give my two cents on what do they mean and am I for it, not for it especially as a female athlete. So let's first dive deep dive into what is a fat diet. So fat diets are kind of quick fix eating plans that can kind of promise you rapid weight loss or

you know and that can happen through really extreme restrictions or some kind of unconventional eating habits.

These diets tend to gain popularity quickly but usually they do not have the scientific backing and also the sustainability part of it right because they can be expensive. Most of the things that they propose may not be available in you know from the Indian kind of mindset or the Indian market really. So and also what happens is a lot of these diets can eliminate some of the most important food groups that are required right and that can actually not help but hamper some of the things that we need especially as female athletes. So just let's look at you know some of the requirements that these kind of diets can fail to meet and I think I've break them down into like some of the most four important parameters. So the first thing that a fat diet can do is you know have give you inadequate energy right because many fat diets severely restrict calorie intake which can lead to fatigue you know reduced endurance impaired recovery.

Female athletes in particular need sufficient energy to support their you know training routines and maintain overall health. So we can't really take the risk of not having the right amount of calories. Female athletes are you know especially because of the whole physiological differences that we have to the male athlete which includes menstruation as one of the most important factors not eating right or not having the right calorie intake and actually play with our physiology which can have you know issues in terms of recovery and then of course cause injuries right. So we have to be very careful. Nutrient deficiency is the second problem in terms of fat diets you know they have imbalance in certain nutrients such as you know carbohydrates or proteins or the healthy fats right and these nutrients are crucial for muscle repair for energy production for hormonal balance like I was talking about in the previous point as well and again which are again very vital for female athletes.

Then the hormonal disruption right that is your third most important point one needs to remember and female athletes rely a lot on hormones and balancing them because they regulate our menstrual cycle, they maintain our bone health so it's extremely important and fat diets that promote extreme weight loss right can disrupt this hormonal function potentially leading to a monorrhea and increased risk of injuries like stress factors right. I don't know if you guys have heard about how women might be more prone to the ACL the anterocrucial ligament injury in the knee and there are you know there's more research now coming out on that but you know in terms of our bone health because of the lack of testosterone you know we are we have to kind of pay attention to what we are eating and any kind of a fat diet can we don't have as much testosterone as a male athlete right. So for us having the right calories in the body having all the palates in our body is extremely important and the last thing when you have all of these things going on in terms of you know inadequate energy, nutrient deficiency and hormonal disruption happening in the body because of the diet change that you're making all of this will lead to performance impairment right. Peak athletic performance requires a combination of strength agility and mental clarity and fat diets often deprive the body of the nutrients needed for optimal performance leaving athletes feeling really weak and unable to reach their full potential. So in terms of my experience I never really you know was part of the fat diet revolution.

I think I we ensured or I ensured that you know I had the right amount of everything in my plate. We work out so hard and of course you cut down on the sweet component of things but you don't you know your one cheat meal a week is all right and that was that was allowed and I think that was perfect because you rather do that rather than you know hogging on one thing in one day. So I think I personally was never a champion of fat diets and I always had a plate which had the right combination of everything right. So I think in all of this the alternative to a fat diet is of course a balanced approach to nutrition right which a plate that includes for example near real nutrient dense foods prioritizing whole foods rich in vitamins minerals antioxidants these foods can fuel our bodies and really aid in female athlete recovery right. Adequate calorie intake is very very important ensuring that you are consuming enough calories to meet your energy expenditure and support your training needs is extremely important.

Even the macronutrient balance right balancing your carbohydrates your proteins your fats So provide the building blocks for muscle repair and sustained energy is extremely important and lastly I feel the hydration part right nutrition the right food without the right water especially for an athlete can be can be a problem. So I think proper hydration can play an essential role in recovery and just overall well-being for all of us especially again for female athletes who are say more prone to a UTI or a urinary tract infection right. So drinking right amounts of water keeps our you know our all of these problems away for us and I think that's why you know having just to sum this up having the right neutral nutrition dense foods adequate calorie intake macronutrient balance hydration you know all of this is very important. So as an athlete I think and especially as a female athlete I feel that the fat diet revolution is not something that we should adhere to and kind of have a balanced approach to nutrition. Thank you so much.