

Essentials of Sports Injury Prevention & Rehabilitation

Lt Col (Dr.) Atul Sharma

Deptt. Of Physical Medicine and Rehabilitation

Command Hospital (SC), Pune

Lecture - 31

Injury prevention in adolescent athletes & Women athletes - Part 02

Good morning friends, myself Dr. Atul. It is lecture 2 of week 7. In this, we discuss about the weight training sessions and other parts. So how much is too much for the young athletes, and are they progressively increasing.

So, while asking young athletes for weight training or resistance training, one should keep in mind how much is too much, and it should not be like they are fully grown. Their bones are not fully developed. Their bones have to be growing, and they are not technically so sound. So the coach who is asking them, first his emphasis on the light weights and the correct methodology of that weight training or resistance training.

It might be with the help of TheraBand or loops, or with the help of free weights or with the machines. We introduce resistance training, it should be light in weight or light in resistance, and more in repetitions of 1, 2 or 3 sets; and these repetitions may be 15 repetitions and with the light weights also. In young athletes till the time he does not attain his maturity, 80% of 1-RM should be the maximum he has to lift. Once he becomes a professional athlete, he can lift his 1RM also, but under close supervision. So, any injury or any physiological disturbances like growth plate or other can be evaluated, treated effectively; so he can pursue his career.

Because irregular or unscientific increase in load causes injury risk, so, that is why 80% of 1RM is advised. Those who are practicing or those who are training for a long duration and their skills and their weight training they are doing for a longer duration, they can increase their further weight but not all of a sudden. And in general those who have just started, they should be started with the free weights rather than the resistance band, because sometimes at the end of those resistance bands, the resistance is quite high rather than the free weights; and free weights should be allowed to them 8 to 15 repetitions they are doing correctly. If not, then the weight should be reduced, it should not be in the mind of an athlete, "I have to compete or my colleague is lifting so much weight why should I not"? So these things have to be cleared by the coaches to them, and it should be closely monitored. In this age, proper skill and interactive cross training should be there; so all skills required for the development of a game are fully covered.

It should not be that, if a person is playing football or a batsman is just practicing for batting or a cricketer is practicing for cricket. They should be allowed to play some other games with lesser intensity, so their other body parts or the growth can be properly exercised. But in western countries and a few games in which they pick up athletes quite young, like ballet and gymnastics, they pick cadets kids quite young so their skeletal maturity, or they suffer from a particular type of abnormality or if they only practice a single game. So their cross training is like involvement with that, the coach asks them to play some other games also. But their main aim is to remain in the specific game like gymnastics and Ballet dancing.

Young athletes are also prone to nutritional deficiencies and peer pressure. They do a lot of snacking, they do not eat on time as compared to the adult athletes. They are aware about the importance of the correct nutrition, but the younger athletes, they go via the taste, and if the sports drink or the snacks is not as per their taste; they do not eat, and sometimes they just forgot to eat or they forgot to drink after heavy exercises, or they land up in a nutritional deficiency. Simultaneously, in competitive sports like gymnastics, ballet dancing, the body image also causes them to diet more to reduce more fat, though they are already very thin, but still they keep dieting and these things have to be checked frequently by the coaches and the other supportive staff. Always be there to guide those children the importance of good snacking, and avoid trans fats, and avoid those refined easily available snacks like chips or burgers and refined pizzas; and their diet should be balanced at least. If young athlete is doing training for 1 to 1.5 hours in an entire day, then he might require 2 gram per kilogram of his body weight of protein, and it may be less but it depends all on the how much training he is doing, and the fat part is also be under control and it should be around 20 to 30% of his daily nutritional intake.

Females require more, and male might be required little bit less as per their weight; and carbohydrates make the main energy sources; and it should be complex carbohydrates rather than the.. complex carbohydrates are much better. The minerals and vitamins should be appropriately taken by the athletes. Training disorders generally develop with the wrong body image, peer pressure, emotional ability and sometimes they have a false feeling of obesity or sometimes those who are obese they start playing some game or their parents bring them to the sports club. "Okay, my son is overweight, now we want him to join this academy, so he can lose weight". So, when this kind of kid joins some club or some sports activity, the coach keeps in mind that he is not a professional athlete or he has just come, and his activity should be monitored and it should be enjoyable, so he can enjoy that part rather than ridicule him about his performance.

Ask him to continuously engage in an activity which he can be busy for an hour or so. So the more he remains engaged, the more his energy consumption will be and he will be losing weight in a scientific manner. Otherwise what will happen when he is only concentrating on his speed or some skill, so that will last very less, and the energy consumption is not compared to endurance activities. Adolescents: though male and female both are athletes can suffer from the

eating disorders like bulimia or anorexia, but females are more prone because their games and their peer pressure and their self body image causes these two kind of disorders, and sometime their performance leads them to eat in anxiety, and the only solution is good counseling and good interaction with them, and educate them about the good snacking, and will automatically come when their confidence will build up, they are good in nutrition. And if 100s play, only one can be a number one.

So, if we educate: “you must enjoy the part of the game, if you are good and you automatically come number one so keep doing hard work”. So there are few tips for the parents and the coaches. First we talk about the parents. So the parents of these young or adult athletes should encourage their kids to play, not force them to play. If the voice comes from the inside, they will automatically join their sports, and they will enjoy those sports; otherwise it is just like a burden for them and lands them in some problem. And, the other thing is also key, sometimes parents or guardians, or coaches, they become so performance centric, athlete is always under pressure, because he is not mentally and emotionally fully grown up.

So it does damage his emotion and his performances, again making a vicious cycle. So, coaches and parents should understand, they should encourage their athlete/kid for the efforts which he is putting in, not the performance which is the outcome. So, if one should increase his efforts, that should be appreciated and allow him and encourage him to participate in the competitions, and at a later age he can participate in any type of competition, whether it is educational or in the professional games. Also, it overall develops them as a good human being, and ask them for the putting an honest effort rather than doing only concentrate only winning of the game. So they start this role also, if abusive in nature and they abuse the coaches the judges, while if they have taken some not favorable for them, and they start abusing. So, their kids learn those things from their parents, and they also start abusing the judges also. And, parents should always respect coaches and support staff, it should not be there they are abusive in nature to the coaches, and if their son is not performing they start creating ruckus over there, and so, it is not because the effort is more important in these young athletes and everyone can't be on the podium. Same thing for the coaches, as these athletes are young and so they require proper time and effort from their sides, and when he is part of a team or he is giving coaching to a number of the sportsmen, he should give equal opportunity to all the athletes. One should not feel he plays good so he only gets a chance, and so everybody should get equal or enough chances to play or perform, and the beginning only when they join or when they start enjoying the game, coach should teach the basic rules of the game. So once they are grown up or they go for the participation, they are fully aware about what is the rule position of those games; and coaches should be more aware that playing is more important rather than winning a competition for the young athletes. And, if he feels this requires special attention or he requires some consultation from the doctors or his performance is deteriorating, then he should not hesitate to ask or he should not hesitate to consult with the or refer to the specialist. Coaches are the one who

develops team spirit in his team and his sportsmen and his athletes, and the same thing goes to the athletes; he should not use a derogatory language or abusive language to his sportsmen or athletes. Thank you so much, here we have completed our adolescent athletes.