

**Course Name: Adolescent Health and Well-being: A Holistic Approach**

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**Lecture: 17**

Lecture 17 - Adolescents And Physical Activity

Hello everyone. So we are into the last week of the course and I hope you all are enjoying and learning the course. I am back again with another lecture on adolescence and physical activity. So we will be covering various concepts in this lecture, few of them being importance of adolescent physical activity, the Fit India movement, the age appropriate protocols and guidelines, suggested fitness exercises as per the age appropriate protocols and the solutions to increase the adolescent physical activity. The various keywords in my presentation, physical activity, Fit India movement, fitness, indigenous sports etc.

Now coming to the background of physical fitness, now we all know that physical activity is important at every age, more so in children and adolescents. The physical activity is intrinsically linked with the achievement of sustainable development goals. Even the global action plan for non communicable diseases, they set a goal of 10% reduction in levels of physical inactivity by 2025 along with other targets to prevent premature mortality, just signifying the enormous thing that physical activity is. Coming to the current state of adolescent physical activity. Now the percentage of adolescents meeting physical activity guidelines has been on the decline for years, owing to more focus on sedentary lifestyle, the use of technology and so many other things. In 2019, only 24% of adolescents met the recommended 1 hour of physical activity per day. That's very less numbers and this is the global case scenario. Coming to the consequences, now poor physical activity habits can lead to lot of negative consequences which includes obesity, heart disease, mental health problems among others. Now coming to the importance of physical activity during adolescence, proper physical activity has many mental health benefits. Now physical activity can improve mental health including reducing the risk of the things that are plaguing adolescents today, that is depression and anxiety. Then we have cardiovascular health benefits. Now regular physical activity can lower the risk of heart disease and stroke, what it does is, strengthens the heart and improves the blood flow. Now by improving the stamina and energy levels, physical fitness helps adolescents tackle the day's activities without feeling fatigued. Now let's have a look at the reasons for the decline in adolescent physical activity. Technology overload. Now from video games to social media to various

applications, technology has assumed a lot of adolescents free time leading to a decrease in physical activity among the adolescents. Now as I roll back over the years and I feel of myself during my adolescent and childhood, I remember that during the evening times coming back from school, me along with my friends, probably we would spend probably 2-3 hours daily on cricket, football or various other sports and we had to push back again to home because we were so much engrossed into physical activities, sports etc. Nowadays the scenario has reversed. Now it is difficult to push the students, to push the children, adolescents outside the home to play sports. They are so much glued to their mobiles, to the technology, to the applications etc. So this is how the change scenario is. Academic pressures. Now there is increasing competition for various entrance examinations, for college admissions. So many adolescents, they prioritize studying over the physical activity, again leading to a decline in overall activity levels. Now there is lack of safe spaces. Many adolescents, they do not have access to safe outdoor space where they can have proper physical activities. Now this can be due to unsafe neighborhoods or lack of resources as well. Physical influence. Another important factor for the decline in adolescent physical activity. Nowadays parents are busy. There are hectic family schedules. There could be both of the parents who are working. Now what this does is, this may mean many adolescents do not get the necessary support, do not get the necessary encouragement that they need from the parents for them to engage in physical activities and other sports.

Now in this backdrop, a very timely and a national initiative came into being, the Fit India Movement. This Fit India Movement was launched by Honorable Prime Minister Narendra Modi on National Sports Day which is the birth anniversary of hockey legend Major Dhyan Chand with the aim of making fitness a mass movement in the country. The predominant focus of this movement is children and adolescents with an aim of preventing obesity and a healthier lifestyle in this age group. This initiative was announced during the monthly radio address of Prime Minister Narendra Modi during Man Ki Baat in March 2019. Now what are the objectives of the Fit India Movement? The various objectives being to increase the level of participation in fitness activities among the people, to encourage the people to incorporate physical activity into their daily routine, into their lifestyles, to raise awareness about the importance of fitness and healthy lifestyle among the people.

Now what are the key components of this Fit India Movement? The various key components being Indigenous Sports. So there is this move towards Indigenous Sports encouraging and reviving traditional Indian sports which have been launched somewhere such as Coco, Kabaddi and Jhalakatti. The National Fitness Drive. Again the emphasis of this movement is in organizing various fitness events across the country be it cyclothon, walkathons and yoga camps. Other key components being the involvement of the community. Again, the emphasis is in encouraging various schools, colleges, campuses, workplaces and various local communities to promote fitness and healthy lifestyle among the people. The other key component being healthy eating habits. Emphasizing the importance of a balanced diet and discouraging the consumption of junk food. Now the consumption of junk food is a fad among the adolescents and this cannot be denied. Hence a key component being emphasizing importance of a balanced diet. Now under this Fit India

Movement, fitness protocols and guidelines have been formulated. Now these are age-appropriate protocols and guidelines which are developed by the Fit India Mission, Ministry of Youth Affairs and Sports. These guidelines are comprehensive and these aim to promote physical activity in various settings. These guidelines are a great step forward to create active people, to create active societies by encouraging physical activity among people of all ages and all abilities. Now this is how the cover page of fitness protocols and guidelines for 5 to 18 years age from Fit India looks like. Now this guide, this document provides a comprehensive overview of how to implement safe and effective fitness protocols to improve the health and wellness of 5- to 18-year-olds. This includes details on recommended physical activity levels, what are the common mistakes to be avoided and guidance on the nutrition and hydration as well.

Now as per the WHO, there is some recommended amount of physical activity per day for the adolescents. For optimal health benefits, children and teenagers should engage in regular physical activity and the recommended amount varies by age and the activity levels. The age group recommended physical activity level for 7 to 18 years is at least 1 hour of moderate to vigorous activity per day. This could include a mix of aerobic, muscle strengthening and bone strengthening activities as well. Now what are the guidelines for safe and healthy physical activity according to these protocols. While physical activity is generally safe and beneficial, it is very important to follow the guidelines to prevent injuries and to promote healthy habits among the adolescents. It is important to have a warm up and cool down before any physical activity. A warm up before the physical activity and cool down after the physical activity. Now both of these are slow and less rigorous activities as compared to their counterpart that is the physical activity per se.

It is important to always start and end the physical activity with these to reduce the risk of injury and improve the performance. Now what warm up does is, basically it is stretching and low rigorous activity or physical activity on part of the participant and what it does is, it revs up the cardiovascular system. It raises the body temperature and it prepares the body for the aerobic exercise which is coming up. Similarly, the cool down is after the activity where the body from a large rigorous activity it comes down to a normal physiological rhythm by low stretching and normal activities.

Staying hydrated. So it is important to drink plenty of water before the physical activity, during and after the physical activity as well to prevent dehydration. Now another important guideline for safe and healthy physical activity is wearing appropriate gears. So wearing comfortable breathable clothing and appropriate shoes for particular activities is very essential. Use of safety equipments wherever required like helmets or shin guards may be used. So it is important to listen to your body and not push yourself too hard.

If you experience pain or discomfort, stop the activity and take some rest. Now what are the common mistakes and misconceptions as far as physical activity is concerned. Over training. Now many people believe that more the physical activity is, more is the merrier. But when it comes to physical activity, this is wrong. Because over training can lead to

burnout, it may lead to injury and decrease performance as well. Ignoring nutrition. So many people ignore nutrition. They feel physical activity alone is enough to achieve optimal health., But this is not so. A balance diet is equally important for providing the much-needed energy and nutrients for the physical activity. Now many people during physical activity focus only on cardio. While cardiovascular exercise is very important, a well-rounded fitness routine should also include strength training and flexibility exercise as well.

Now balance diet and hydration for optimal fitness. Now importance of a balance diet is very crucial for optimal health and fitness. It provides the nutrients and energy needed for physical activity and the recovery. Hydration is also very important for preventing dehydration and maintaining optimal performance. So proteins are very important for the muscle growth and repair. The good sources include lean meats, poultry, fish, beans etc. Carbohydrates now these are very important. These provide the much-needed energy for the physical activity. It is important to choose the complex carbohydrates like the whole grains, fruits and vegetables much against the sugary or processed options which are very readily available. Now fruits and vegetables. Fruits and vegetables these are rich in vitamins and antioxidants that support overall health of the people. The aim should be for at least 5 servings per day of fruits and vegetables. Hydration so it is important to drink plenty of water throughout the day specially before, during and after the physical activity and again it is essential to avoid sugary drinks like soda and energy drinks. Now what has been seen among the adolescents is when they have some physical activity or some sports during the breaks or after the sports may be they take a bottle of coke or some other soft drink. This is a rising trend among the adolescents and this should be stopped. These sugary drinks must be avoided.

Now coming to the fitness program that is suggested by this Fit India movement. Basically the purpose of the fitness program is to enable the children to demonstrate individually and in groups the physical skills, practices and values to enjoy active healthy lifespan. The various key objectives of this fitness program are ensuring 60 minutes of moderate to vigorous physical activity per day, promoting the mantra of fitness for all, institution of age appropriate progressive curriculum, fitness assessment report card for every child from class 1st to 12th. So basically physical fitness assessment by school for each student has to be done by trained staff to track the fitness level of the child and health indicator as per the Khelo India battery of tests we will be discussing them for class 1st to 3rd and class 4th to 12th that is 5th to 8 years age group and 9th to 18th year age group. Then again, we have assessment of children by their parents as well. Creating a system for monitoring. So basically it is tracking the overall improvement of the school as well as each class and children and reevaluating whatever the intervention strategies are in place. Then next we have developed a system for a regular feedback mechanism and program reevaluation strategy as well.

Now the various battery of tests that we have discussed before for age group 9 to 18 plus are as follows. So various components that are considered in physical health and fitness profile for 9 to 18 plus are BMI that is the body composition, body mass index, muscular

strength and endurance. So, under this we have abdominal or core strength and we have muscular endurance that is pushups for boys and modified pushups for the girls. Then we have flexibility where we have the sit and reach test, cardiovascular endurance by a 600-meter run or walk and speed by a 50-meter dash. So these are the battery of tests for 9 to 18 plus years age group. Now coming to the various suggested fitness exercises for age group 9 to 14 years. So the Fit India recommends endurance related activities for age group 9 to 14 as spot running which improves speed and endurance and core strength as well, climbing stairs for endurance, walking on toes, swimming, jumping jacks and marching and swinging the arms as endurance related activities. Now coming to the suggested fitness exercises for the same age group, the strength related activities, so the recommended strength related activities for this age group is straight leg raises, push ups on the wall, long jump and goal keeping while the flexibility related activities are stretching the calf, child's pose, knee to chest and bend down. Next moving to again suggested fitness exercises for the age group 9 to 14, the balance related activities. Next moving to suggested fitness activities we have single leg stands, leg swings and walking on lines of various different shapes. Coming to the age group 15 to 18 years, the suggested fitness activities recommended for endurance and speed related activities. So, we have 800-meter race, brisk walking and quick air punches for the endurance, 4 into 100 meter or 200 meter or 400-meter relay race for endurance and speed, swimming for cardio endurance and walking lunges for muscular endurance. For the same age group 15 to 18, the strength related activities recommended are curl up for core strength, the planks for again for core strength, push ups for the upper body strength and squats for lower body strength.

The flexibility related activities recommended are a forward bend that is only for flexibility. Now suggested physical activities by age if we divide into 10 to 14 years old and the 15 to 18 years old. So broadly for 10 to 14 years old activities such as basketball, soccer, cycling, they can help with endurance and the muscle strength required at this stage while for the 15 to 18 years old activities such as swimming, tennis, weight training, these are recommended. These help to build strength and improve overall fitness in this age group.

Now what are the common mistakes and injuries that need to be avoided? So, what we have seen in many people more so among the adolescents that they skip the warm up and cool down. The importance of these I have already emphasized. So when they skip the warm up and cool down, there are chances of injuries. So this should be avoided. Pushing too hard too fast. So in getting quick results, in trying to get quick results, it could be in like athletes, it could be in various sports, people they just stretch too hard, they just put in too many efforts. So, these may lead into injuries. Not using a proper form and techniques. Many times lack of a proper trainer, lack of a proper mentor leads to injuries due to the form and technique of the physical activity not being proper. So again this needs to be avoided. Now injuries to avoid. So, stress fractures and sprains may result due to overuse. This should be avoided. Strains and muscle pulls due to improper technique. This may happen. So again this should be avoided. And dehydration, heat exhaustion, this can occur due to lack of hydration. So, drinking plenty of water will help avoid this situation.

Now what is the recommendation for parents and caregivers? Parents and caregivers have a very crucial role as far as adolescent physical activity is concerned. Encouraging daily activity. It is important that the parents and caregivers encourage at least one hour of moderate to vigorous physical activity among their adolescents, among their kids every day. It is important to limit the sedentary behaviors from the parents side. It is important limiting the screen time to no more than two hours per day and promoting active leisure time activities. This could be gardening, this could be going out for hiking, this could be any other active leisure time activities and which could be fun as well for the adolescents. Staying safe. It is important for the parents to be aware of their adolescent skill levels and supervising the activities so that injury is prevented on the adolescent's end. Another thing, recommendation is family fitness. So again encouraging family fitness with activities such as hiking, swimming, other outdoor pursuits and this makes fitness fun and this may keep the adolescents engaged and excited about the physical activity.

Incorporating yoga. Now again the yoga guidelines have been given according to this protocol for different age groups. This yoga can improve strength, flexibility and overall wellness of the adolescents and incorporating yoga into a child's fitness routine can increase energy levels and mindfulness as well. Now what are the various challenges and limitations? First, we have the infrastructural challenges. So there is lack of facilities and infrastructure for fitness and sports in many parts of the country. Still sports and physical activity doesn't get it due in many parts of the country. Educational challenges. There is inadequate awareness and education about the benefits of fitness and healthy lifestyle among the parents, among the adolescents, among the teachers as well. Then we have the financial challenges. So the cost of fitness equipment and gears can be a prohibiting factor for many individuals and communities. Due to this they may not go up or take up physical activity and other sports.

Let's have a look at a few success stories and notable achievements of the Fit India movement. The first is the Fit India school. So the Fit India school certificate was awarded to over 600 schools across Delhi. This is a big achievement in itself. Then we had the Plogrun. The Plogrun, another national initiative under this movement was launched in Goa which combined fitness and environmental awareness. Then we had India setting a world record for the largest yoga lesson with over 1 lakh participants. So, these are few of the success stories of this movement. Now coming to the further plans and expansion of the initiative. What we have seen is the Fit India movement has already achieved significant success in promoting fitness and healthy lifestyle in a short period. But there is still a long way to go. There can be infrastructure development. So, developing world class facilities for fitness and sports across the country is the need of the hour. Then there is promotion of indigenous sports. So it is important to revive and popularize the traditional Indian sports such as Koko, Kabaddi and Jalikattu. There can be partnerships with schools and communities. So, it is important to encourage more schools and communities to participate in fitness events and activities which will go a long way in healthier lifestyle among the adolescents.

Now what are various solutions to increase adolescent physical activity? Encouraging parental involvement. Like we have already discussed, encouraging parental involvement is a huge factor as far as solution to adolescent physical activity is concerned. Parents can set an excellent example by participating in physical activity with their children and encouraging healthy habits among them. It is the parents from whom adolescents learn. So they will try and imitate their parents and do those physical activity and sports that the parents are doing themselves. It is important to create safe spaces. So, communities can themselves pool resources to create more safer accessible outdoor spaces for adolescents to participate in physical activity and other sports.

Incorporating physical activity into the academics. Another important factor where schools can incorporate physical activity into their academics creating opportunities for healthy movement. Utilizing technology for good. Like every coin has two sides, even technology has two sides. We have discussed the bad effect, the side effects of them, how due to that certainty habit is promoted. The technology can be a tool for promoting also rather than inhibiting physical activity by creating various fun and interactive experiences for the adolescents.

Now coming to the take home message, the physical activity in adolescence is very important as far as the overall health is concerned, specifically mental health issues such as anxiety, depression, cardiovascular health, etc. is concerned. The Fit India movement, a national initiative and a timely one with a focus more on children and adolescents in preventing obesity and promoting healthier lifestyles. Now this Fit India movement has specific guidelines and specific age appropriate protocols and guidelines for the adolescents. The various solutions to increase adolescent physical activity can be the parental involvement, creating safe spaces for the adolescents' involving schools and communities as well. The parents and caregivers have a huge role to play as the adults look forward to them as their role models and the parents by themselves getting involved in the activities can increase the adolescent physical activity as well.

These are few of my references.

Thank you so much. That's all from my end.