

ICSC Culture Diversity Module 09

ICSC09 _Section 2 Senior Athlete

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Video Lesson: 55:40

My name is Dr. Anne Sorrentino, I am a Sports Chiropractic Diplomate with the American Chiropractic Board of Sports Physicians and a member of FICS. I am here to present special considerations in specific athletic groupings, the senior athlete.

If we define special populations, they are by definition, a group that requires more Healthcare Services or specialized Healthcare Services than the average person. The greater need for healthcare services among those populations is generally more costly to the system. We can spend some time understanding what their healthcare needs are. We can perhaps reduce some of the extra costs and also give them a more productive life.

There are several categories considered special populations; pediatric/adolescent, the female athlete, differently abled and then there are also special diseases in disease states and sports. We are covering what is officially titled the geriatric athlete, but I got to be honest with you, there is no way I am going to use that term with me ever, I renamed it, the Senior Athlete.

Welcome to being a Senior Athlete or using that term, your patients will appreciate it. When we cover the guidelines for this presentation, they are based loosely on the CCSP Program Guidelines from the ACBSP, but I will be covering some international information. We are going to cover psychology and motivation, exercise with aging, underlying systemic disease, and some exercise prescriptions.

Geriatric refers basically to medical care for older adults, but the age group is not easily defined. "Older" is a term that is preferred over the elderly, but they are both imprecise titles. When I started doing all my research for international situations, the Aging Athlete is basically what was discussed.

When we talk about the Aging Athlete or the Senior Athlete, we are referring to anyone that is over 65 years, that is usually the number used. But most people don't even need geriatric expertise before they are 70 or 75 or some even 80. The mean age of those that are more than 65 is now more than 75 years of age. We have a lot more people that are in their 60s, 65 age group, than those above 75. We are seeing more and more people that are exceeding the 80s and the 85s.

But American Association of Retired Persons started sending invitations to join at age 50. At this point, what is the age? We looked at the United Nations and the global population aged 60 or over is about 1 billion out of the 7 billion people on this planet. In 1980, it was only 382 million. But when we look at what's going to happen in 2050, which is only about 40 years from now, it is going to be 2.1 billion, look at the exponential growth.

The number of people aged 65 years or older in 2011 was 11.2% of the population and that will double when we get to 2040, which is in 50 years and they still be alive too. At this point, we are looking at how Healthcare is evolved, how science has evolved, and how things have evolved that are keeping us alive longer. Because in 1914, a girl born in England only had a 1% chance of living to 100. Now, fast-forward 100 years, and there's a 50% chance of living to more than 105. I don't know if I want to be around that long, but the possibility is there.

Let us see what the psychology and motivation are to have the Senior Athlete participate in physical activity. When we start to look at our demographics, we see a higher prevalence of men working out than women, but as they age, it starts to decline. The numbers will stay a little higher with higher education and a higher income. Those that are widowed start to come out and maybe stop going out and becoming physically active.

White non-Hispanic and Asian Pacific Islanders are more likely to exercise than Black non-Hispanic. I see a lot of elderly Asian Pacific Islanders that become runners, and they are populating some of the races. But ageism is the third greatest prejudice. Ageism is very simple making the practice of unsubstantiated judgments.

Start to rethink those judgments because when you are looking at someone's age and already having a preconceived notion, as to what that person is going to be like based on the chronological age, I still remember when my mother turned 80 and she said I don't want anybody to know that I am 80. Did she look 80? No. But she was, I don't want anyone to know that because they instantly give you a look and they sort of look down on you as if you don't know anything and you are useless and there's nothing for you to do.

We see that in healthcare, yet there are people that are so productive, right up until the day they die. Brett White died just shy of her 100 birthday, Tony Bennett is still singing. We have these clinical decisions that we make as Healthcare practitioners, not based on their health status, but on their age. We all accept that there are things we were not going to be able to do with our bodies as we age to a certain point.

Our brain is still 14, we are still functioning and knowing that we can do something, maybe not this fast, maybe not as hard, but we can still give it a good go. Another barrier we are seeing toward physical activity is the cost. It costs to go to a gym, to buy exercise equipment, and it costs to have a personal trainer or join an exercise class. There are some physical limitations and the one thing that is getting good in all the exercise classes is they are doing progressions and regressions.

They are training the exercise instructors to be able to level up or level down. If you cannot do a push-up on two hands, drop down to your knees. If you cannot go all the way down, do it off a table, do it off of a chair. They are starting to make these exercises for more doable for every age group and every ability.

Another barrier is a lack of motivation, which we all have sometimes? You wake up, it is a dreary rainy day, and the last thing you want to do is get up and go for a run or even go for a walk. Maybe you will do it later in the day, but then you get into something else. Those motivation factors can crush any of us, it is not just the older ages. But this is a very important point to look at this at the bottom.

Older patients have lower expectations of their health status. They believe they are unable to play, and they walk past the park and watch a bunch of people running around playing soccer or football and think I used to do that, but I cannot do that anymore. How do we get through those barriers? We must look at the lack of motivation and what levers we need to facilitate change. We must look at what a person thinks are true, what a person thinks are good, how a person does things, and the person's talents or ability.

Maybe they cannot raise their arm straight up in the air and have to do it a little slower, moving it in a certain way. Maybe they cannot get it up and they can only go here. We must look at what their ability is, and where their limitations are and come up with a way to make it work.

The athlete must perceive a benefit. It can be qualitative, it can be quantitative. It can be I walked twice today, it could be I made it back and forth to the corner, I went down to get my mail and then moving a little further. My mother just had a knee replacement and she wants to go, go, go. She has to accept what she can do today, and tomorrow will be better than today and the next day.

We have to see that build-up, and the athlete has to see that and be able to look back to yesterday going, "Oh wait, I could only walk down to the driveway. Now I walked up to the second house up the block." Monitoring changes in those measurable indicators are phenomenal, just for their healthcare, whether their glucose is going down because of your testing through a glucometer. Their BMI, we have scales that now will tell them how they are starting to lower their BMIs.

DEXA scans where they are starting to see that their osteoporosis may not be declining and it is starting to get a little better with their bone density. Blood pressure going down, balanced tests, smartwatches. Someone told me a joke "What is the smartest thing about a human?" I said their smartphone? These phones are telling us everything. People are tapping them and looking at what their oxygen intake is.

But some of them don't like technology, so they keep a diary to see their progress. Paper and pencil still work, and I do love my paper and pencil. Approximately 10% of older adults participate in regular physical activity for 30 or more minutes, five times a week. This is the common recommendation from the Centers for Disease Control and the CDC in the United States. Approximately, 35 to 45% participate in minimal activity.

It is interesting when you ask what their physical activity is because there was an elderly gentleman at my husband's office, and I was covering for my husband while he was away. I remember saying to this gentleman, I said, "You walk?" He was, "Oh, yes I walk every day." I said, "Oh, how far do you walk?" He was, "Well, I walk up to the second floor of my house". I went, "Okay." He replied, "Well, my wife's on oxygen so I have to go up to the second floor to smoke a cigarette". I went, "Okay". Did I judge? I just said, "Okay".

Then I had the other woman who said, "Oh I walk." I said, "Oh, how far do you walk?" She was, "I don't really walk". Sometimes making your patient accountable and then you have to decide how are you going to inspire them to get up on some of this activity? Because when you ask what that minimal activity is, the two most likely answers are, are they walking or gardening? I am like, "Gardening is your physical activity, well, you have never seen me, garden?" "Okay, I have not".

I remember Roy Decker who has long passed, who would come in every July because he fought the rototiller while he was gardening, his field of one acre. That's gardening. You have to define what their activity is. Don't hesitate to ask because older adults tend to be less active than other age groups for many reasons. But if I have to say the number one, they have disorders that are limiting their movement and that is one of the number one factors that we see as barriers.

The athlete comes in and then you have different people come in to see you. Some have been physically active throughout their life. Let us go back and talk about my mom because I still remember 1965 her standing in front of the television holding onto the chair doing abduction exercises with her leg to Jack LaLanne. Jack LaLanne was a U. S. exercise guru who was a chiropractor. He ended up going into the world of exercise, becoming as a personal trainer he was a well-known exercise guru and he used to run a TV show.

That was one of the very first exercise TV shows back in the 60s. I would watch my mother do these exercises and then when I joined a gym at the age, of 22 my mother in her mid-40s also joined the gym, and she has been going to the gym ever since. She has been physically active throughout her entire life. You have those people that were that level, they are still doing things, they are still competing, and they are still blowing us away in marathons.

Their care has to focus on sprain or strain injuries. Now you get to weekend warriors, and those are the ones that want to go out and crush it because their college roommate just came into town and they are

just going to go all in, because they used to play. They play for two hours and then they are coming into your practice limping. Their college roommate who flew in for the weekend didn't tell his friend that they were playing tennis every day.

These weekend warriors just try to do it all in one day. We need to teach them how to temper it and add some movement during the week. Then you have the people that are realizing that they are declining in age. They have just retired from their job and now have time to exercise because that was their number one limitation while they were working. They want to get back into physical activity, but they cannot all afford a personal trainer.

With our care, we get them to start slowly, because they don't have much muscle mass, they have a lot of disuse and we have to start to build a more reasonable pace. First of all, start with some motivation because exercise in aging, there are benefits to physical activity. Those benefits apply to the aging population, the same as they do to the high school kids, the college children, and the people that started in their careers.

My father was significantly overweight, when I graduated college, he looked at me and said, you better come up with some physical activity or you are going to be fat like me one day. He said, "Anne, you have played sports after school in high school and college teams ever since you were in sixth grade. You practice for 2 hours a day. The way you eat, if you don't come up with some physical activity for the future, you are going to be fat."

It did stimulate me and I joined a softball team, then I joined the gym when I was 22, and started teaching at the gym. Here I am at age 62, and I am still working out pretty much regularly every other day. Those are lifelong habits that we know will help us. People are starting to realize it, in all the papers that they are going to see declines in the loss of skeletal muscle strength and aerobic activity.

If they are going to lose that level of muscle, they are going to lose their mobility and their independence. Aerobic exercise is great for lowering blood pressure and that endurance training not only lowers blood pressure, but it will also alter the plasma lipoprotein profiles. You have a reduced risk of obesity. You can still eat a lot, still have the same rule that your output needs to be higher than your input. But you can control it a lot better if you are maintaining your physical activity.

Even if smokers and the obese start exercising in their later life, they are going to reduce their mortality rates. That is an important thing because a lot of times smokers don't want to get that through their head and the obese is like, well there's nothing I can do. Believe me, there's always something you can do. These are some of the more important things I see because you want to prevent cardiovascular disorders. We know that movement is going to help that getting up those aerobics, even just walking on a treadmill if you cannot walk outside.

Diabetes, osteoporosis, and weight-bearing exercises are going to reduce your risks of that because women do have a much higher risk of osteoporosis and men can get it also. But we need more weight-bearing exercise not just sitting. Your colon cancer is moving around, you are going to get a lower probability of that. But what about mood disorders? Don't we all build our endorphins when we exercise? But you have to get this through the head of your aging athlete.

The prevention of falls is huge because everybody thinks that balance training and core stability are the number one prevention of falls. Guess what? It is a toe push-off. You have to get strength in your toe. When you watch people walk, they start to walk with what I call that duck walk, their feet go out. If their toes are forward, they will grip when they fall forward. But if their feet are angled or one is angled and the others not there won't be anything to grip them, and they have a higher probability of falling. I give

the valley manoeuvre as an exercise to my patients for toe push-off to try to start to strengthen them so they can prevent themselves from falling.

Improve functional ability. Opportunities for social interaction, that is an interesting thing because you have people that are wanting to stay in their houses for longer periods, which means they are going to get isolated. It is not that they are just going to move to a nursing home, a group home, a senior living facility, or some of these over 55 neighbourhoods, which is a great place because they have activities in their clubhouses. But sports physical activity going to the gym, it is so nice when you go to the gym and they are like, "Where have you been for the past three days, we were here without you?" People care about this.

You have that social interaction, and that gives you that sense of well-being aside from endorphins, the fact that somebody loves you and wants to see you, like a work out partner. You may see improved sleep quality.

This is an important point. Physical activity is one of the very few interventions that can restore physiological capacity after it is lost, it is not a drug. Starting to move again and you can start to see those gains.

When you are evaluating these people, you have to look at the effects of aging and these must be considered during your diagnosis and treatment of the older adults.

On the slide in red, highlighted, "you don't want a mistake pure aging for disease". How many times has someone asked you a question and you say, "it is on the tip of my tongue" and I am saying, I am sure I will remember what I am thinking of at 2 AM, when all of a sudden I wake up. That is slow information retrieval, that's not dementia.

We build up so many things in our brains and we cannot dump some things and it takes a little bit to run through all those files in our brain, that I just cannot dump. Even though I am using a Mac 11 computer, I have different files and have to find what I am looking for. That is exactly what I am talking about. That is not dementia, that is just overloading. Don't mistake pure aging for disease, or disease for pure aging.

My dad had something called NPH, Normal Pressure Hydrocephalus, it was a water build-up on the brain. He was having some trouble walking. He had diabetes and he had some trouble with incontinence having had prostate cancer. His mother had Alzheimer's. He went to the neurologist and the neurologist was, this is not aging, it is NPH and they had to drop a shunt in the brain to drain the water. He was clear as a whistle and he could walk again, all the problems started to clear out.

Keep in mind, if there is something that is just not right, start talking to other people in the family, and then maybe you can get a solid diagnosis. By the way, I am no expertise on NPH. It was not until my dad went to the neurologist and got everything checked that the mystery was solved.

Do not ignore the increased risk of adverse drug effects on weekly link systems. When you have a system that is overly stressed by illness, those drug effects can be very debilitating. When drugs were created, they would test on a 150-pound man. 60 kg is 134 pounds. I am going to say 72, 74 kg, that is where they were tested. They were not being tested on the 110 lb, 70-year-old woman. The 52 kg were not being tested on someone that was 80 kg, they were tested on a certain window. As a result, the drugs would have different effects, and those drug effects could be pretty debilitating.

Let us not forget the older adults that have multiple underlying disorders. Ian McClain, who was a radiologist in my Chiropractic College was very clear to say this, "A patient is entitled to have more than one thing wrong with them." Unfortunately, as we age, that is going to be very true. More often than

not, you are going to see a lot of things mixing together. You are going to see the comorbidities tip. You are going to see things that can be very life-threatening mixed up together.

You have to pay attention to all of that and a referral is warranted. Some of the problems are associated with aging but not necessarily because we do see people now in the younger ages with obesity which then promotes cardiovascular disease. They are going to have respiratory changes because of carrying an extra load. They are coming up the stairs and their oxygen is going to be maybe a little lower because you are not going to have the elasticity in the bronchioles that they had when they were younger.

You are going to see a neurological decline. You are going to see neuropsychiatric changes. They are going to get a little irritable. Why are they getting irritable? Maybe they cannot see as well. Maybe they cannot move as quickly, and it gets irritating. There are going to be gastrointestinal and genitourinary changes. They may be only able to eat a little less. One of the things that I was very excited about in the ARP magazine, the one that they start sending to you when you are 50 is they talked about how the protein needs are much higher as we age. That is because we have got less muscle mass and we need to build more muscle and that's what the protein is going to do.

You have a lot of them carving out there wondering why they cannot lose weight when they have not been eating that much, but it is the quality and sure enough, I popped my protein back up to 28 grams per meal. The weight is starting to come back off because I am pushing it with the lifting. You need the protein to build that muscle and you are going to see the musculoskeletal changes.

My son is 31 years old. He is an ER physician, he looked at me one day and he said, "Mom, you are in great shape but let us face reality, your muscles and ligaments are still 60." When I looked at the stats, at age 25, it takes a force of about 250 pounds to tear your knee; ACL, meniscus.

When you are 60, it takes the force of 125 pounds, it is half the force when you are older, because the elastin is not there, and the cartilage is a little bit thinner. Those are all considerations. Then, we have our special circumstances recovering from a stroke, cancer, and osteoporosis. Don't forget these people, they need to exercise. We need to keep them moving too and keep them at the best they can be.

Chronic disorders are probably going to need a complete medical examination before they start an activity. Some experts will recommend an exercise stress test for patients that have two or more cardiac risk factors. Hypertension and obesity are going to be the two most common. For those that plan on starting an activity, more strenuous than walking. Walking, as I said, is one of the top activities that people are going to do and it is usually where they start.

Older patients that are starting an exercise need to be screened to identify chronic disorders, so you can determine the appropriate activities. Because everybody can do something. It is no different than when we do our PPEs or Pre-participation Exams. Even if someone may have to be contraindicated, maybe to play basketball, maybe they can shoot, archery. There is always an activity we can find for somebody unless it is an unstable medical condition.

Anyone can begin brief periods of walking and then you want to increase that to 30 minutes five times a week. The screen is not necessary to have them start walking unless there are balance issues. We see this couple right here and they are using trekking poles. Trekking poles I know we are very popular overseas. They are just starting to make their way into the United States. People are using them more and more, but this is very common in Nordic walking.

Norway, Sweden, and some of the upper Scandinavian countries have been doing it for a long time. I took them out on the trail, and somebody giggled when they saw me. I said, "You give it a try." All of a

sudden, they say, "I am standing up a little straighter and I am moving faster." I went hiking with my son for my 60th birthday. We hiked a mountain called Old Rag and I brought the hiking poles out. My 29-year-old son said "Oh, don't tell me, you are going to be one of those."

I went, "I am bringing them with me. I don't know where I am going to need them, but I am going to bring them". We climbed up and I did not use them going uphill, but coming down scares me a little. We are coming down the mountain and I am ahead of my son, using the trekking poles to help stabilize me. I have to step down from a large boulder and I sudden hear sliding. I turn around and there is my 29-year-old son sitting on the trail, on a rock.

I said, "Can I help you?" He goes, "I am good" I said, "Would you like a trekking pole?" He goes, "Maybe". Then guess who used one of the poles for the whole way down while I used the other one. Make sure your patients are aware of this because it does move them along quickly. My mother used them as well, she was blown away by how much better she walked and how much better her core felt. That's my spiel on trekking poles.

We are going to cover the PAR-Q. Now, it is called PAR-Q+. It was called the PAR-Q for many years and then they updated it. The PAR-Q+ is a seven-question health screen, for identifying pre-existing health conditions. It wants to cover the seven aspects of health, your aerobic, your anaerobic capacities, and your cardiorespiratory, so there are going to be some long questions and some hard questions.

Your strength, flexibility, neuromuscular function, and just your general performance. The thing that is unfortunate about the PAR-Q is it is only designed for ages 15 to 69, but that doesn't mean if you are 72 or your patients are not 72 you shouldn't still give it to them. It gives you a really good sense of what's going on because you want to be able to say, "You know what, you might be 72 but you don't have any risk factors. We are going to okay you to participate in this". But it is entirely subjective.

They are going to be more honest than you can imagine, but it is going to identify some pre-existing conditions that might be marked a little bit by some consistent exercise. Let us take a look at the PAR-Q.

Aside from you seeing it in the slides, if you Google PAR-Q it is just going to come right up. This is the updated one obviously, from 2021. They do not update it every year. I think the last one was in 2011. We look at the seven questions and I am not going to read everything to you, just going to summarize. What we are going to start with is, has your doctor ever said that you have a heart condition or high blood pressure? Because sometimes they will say, "It is a little different than do you have it, it is more have you been told. But do you have pain in your chest at rest?" Because maybe they do, maybe they have not been to a doctor in a long time and mentioned anything like this. "Do you lose balance because of dizziness?"

That is a very strong possibility. They stand up and they are like, wait a minute, I am dizzy. I just sent a patient out for that recently because after working on him whether he's working on his neck or whether I was working on his upper back or low back when he went to sit up, he was dizzy. I was like, "You know what? This is not normal". I've known the man for eight years; I sent him out.

Other chronic medical conditions besides heart and blood pressure. What medication are you taking? Be aware of what the medications are. Be aware of the generic names. I like this one down here because it covers it. Have you had a bone, joint, soft tissue, muscle, ligament, or tendon problem? A lot of them will come in with tendonitis and we are seeing a lot of tendinitis from this great sport that's taking the senior population by storm in the United States, which I will come to.

Has your doctor ever said that you can only do a medically supervised activity? Because you know what? Maybe they were told that by their doctor, so they are coming to you for a different answer. Keep in mind, that patients can lie, we all know this. They don't expect you to give them the questionnaire that maybe their doctor did. But if they are clear, then we have a green light full steam ahead and they can sign it off and you have it because you've now covered your butt, they get a copy, you get a copy.

If they answered yes, to anything, hey, guess what? We are rolling on to number two. Because even though we are not doing a full pre-participation exam on them, the screening questions are pretty darn good. Now, we also have the yellows, and the yellows are very simple because you know what? That doesn't mean, no, it means, "We have to get this thing clear. You are running a fever, why don't we wait a week to do this? You are running a cold, wait."

One of the things that they could be running is bronchitis. In bronchitis, a lot of people will feel a little better when they are out doing some physical activity, and then they will be tanked later on at night. You got to get bronchitis too pretty well clear, but I feel so good when I am moving. But look at your two hours later, you are on the sofa trying to survive.

Back to PAR-Q. There are follow-up questions basically as what I am saying to those initial seven questions. The bottom line is that there are questions and athlete answers, yes. Just send them for a full evaluation, take it off your plate. I just wanted to go for a walk, it is becoming so complicated.

I am going to tell you about this picture, which came from the internet. I hiked in Patagonia as my gift to myself for turning 60 and I did an 80 km hike. I went by myself, I met people. I walked into this one place, and we were in Argentina and this group comes in laughing and singing and there were about 15 of them. They were having the best time. It was a group from France. They were easily 10 to 15 years older than me. Yes, they did other trekking poles. They also all have their wine casks with them. They all brought wine from France, to be able to drink down in Argentina. I loved that group. They were just so exhilarating and what an inspiration, all of them were.

Back to the PAR-Q, these are your follow-up questions and again you can Google these. Do you have arthritis, osteoporosis, and a couple of questions for that? Do you have cancer? Because certain cancers are going to limit the types of activities they are going to do. Heart conditions, we have already hammered that so I am not going to keep going there. Blood pressure and metabolic, diabetes, what kind? These are a few more of the PAR-Q questions; respiratory disease and spinal cord injury. That's going to put you into a different type of activity.

Watch the eating disorders. Because they can try to overdo and do themselves in, pay attention to that one. Strokes, and what about a medical condition that's not listed? I will give you one, narcolepsy because I had a patient on the table and she fell asleep when the table was upright. I said "Excuse me." The patient said, "I suppose, I should tell you, I have narcolepsy, you didn't have it listed on your form." Pay attention to that step. Back to the red, yellow, and green. Their signature, you keep a copy, they keep a copy.

What kind of exercise programs should we be looking at for the people that want to get back into these fitnesses? This woman is awesome, how much she's lifting? Exercise programs are more strenuous than walking, they should have a combination of exercises. The four types are endurance, muscular strengthening, balance training, and flexibility.

Tai Chi is more balance. Flexibility, you are thinking your yoga, and Pilates sometimes fall into their stretching programs. But the combination of exercises is really what is recommended. You are hoping to get a few of those mixed and they don't need to do everything on the same day, they can mix it up.

There's no guideline on that or rule. This I put in here because I was so impressed. I got to tell you, this place where my mom had her knee replacement, was incredible. When we walked into the room, this sign right here, hourly exercises, it is in every room on this floor.

They were told to perform each exercise 10 times on each leg. Not just one leg, because we know about contralateral exercising on each leg every hour. First, they pump their ankles, their quad sets, and their heel slides, butt squeezes, single leg straight raised, and hip abduction. They were very clear in physical therapy with everybody and said, "Do not miss a day of doing these, if you do, you will have a miserable next day". I was excited about that, because there were a couple of people who were saying, "Do I really have to do these every day." and you say "Yes, you need to do them every day. You want to make this new leg work for you."

The point I am making is you can always do something to start moving. Even if you are limited you can start with things like ankle pumps, heel slides, and butt squeezes. I love this down at the bottom, this is a rule to live by. Life has two rules. Number one, never quit. Number two, always remove remember, rule number one.

Let us look at the other things that they can do. We have seated exercises. They don't need to sit on a ball, just throws a little bit of extra balance and core in there, some of them might need to sit a little wider than others but they could be sitting in a chair to start. They can use cuff waits for strength training on the ankle and the wrist. They can do some repeated movement with those because they may have that difficulty standing and walking.

Aquatics exercise programs are huge and work well for patients with arthritis. Usually, there is an instructor, and they now make these aerobics shoes. They cannot complain that their foot is hitting the bottom of the pool and it hurts. They make water aerobics shoes.

Patients should select the exercises they enjoy but they want to have all four included. Patients always ask me, what's the best exercise? My answer is straightforward. It is the one that you will do. They say "I don't love exercise." I said, "Not today, you don't, but you will." Then, there are endurance exercises. The walking the cycling, they can get on a bike and pedal. They have the recumbent bikes; they can do that. Some of them still like to dance, and they can do slow dancing. They can move around. They can just do side-to-side stepping its movement.

Remember that adage? What was it? Motion is lotion. There that will give you one back for the memory banks. Some like to swim and then you have your low-impact aerobic. Those are all some options. Here are your basic guidelines, and this comes to us from the National Academy of Sports Medicine and the Aerobic Fitness Associations.

Aquatics, chair-based resistance, cycle, basic or beginner yoga. Three to five days a week, start at moderate, three days vigorous. You don't want to ever have two intense days back-to-back, that will crush him. You can have some moderate days. You can have some light days and you can have some vigorous days. Those are your ideas. You want 30 to 60 minutes a day, but they can do them in 8 to 10-minute bouts. I love Peloton because they'll do a 10-minute class.

Then maybe the next hour I want to do another 10 minutes and then maybe the next there's no rule that they have to go somewhere and work 60 straight minutes or 30 straight minutes. If they are at their house, do something for 10 minutes. My son will get up on commercials and do 10 or 20 push-ups. Then the next couple of commercials, he might do 10 or 20 sit-ups, and then the next one, he might do some squat jumps or some body weights so you can break it up for them and they'll be able to think how to do this.

Your special considerations are that they need to progress slowly. We don't want their first day to be their last. They want to progress maybe towards free sitting, freestanding, or getting up off the floor without using all the furniture in the room to get there. They want to breathe normally. I love what the top trainer said at my old gym Tyson's Playground. "Exhale on the effort and remind them they need to breathe". Breathe when it gets hard, that is where they exhale.

Slow, rhythmic, active, dynamic stretches. Some of them will use a self-myofascial release. Some of them will sit on a foam roller, and some of them will do some easy stretching. Some of them will have one of the Theragun or a hyper volt and want to use that to do some easy stretching. Just tell them to take it easy and respect their muscles and joints.

Look at this picture and the intensity in his eyes. He's over 70, and has that racket, in an athletic stance, ready to go. That is what I want to see because you are going to see those people in your office and they are intense.

Let us talk about International trends. There are present and future trends for Senior Athletes' Sports participation. These are the trends that we are going to be seeing in the next 5, 10, and 15 years. More seniors are going to be getting into exercise, and that is because they wish for long life and a healthier lifestyle. "Yes, maybe I won't get to live longer with all I am doing, but I am going to make a great-looking corpse." "I need to make sure that I continue moving".

Health insurance companies are going to start to incentivize sports participation because that is going to reduce General Health Bill. Older women are increasingly becoming more active in sports, and there's that need for social cohesion, which I covered earlier. There will be a generational impact. Right now, we are in the boomers that are all starting to cross into those elderly or senior ages. Gen X is next, and they are going to start aging to 60 years old. That generation was raised with sports and exercise and they will continue in sport because they already like their Sport and know it is important to stay healthy.

What are we going to see in products? There will be an increase in the number of products made specifically for the elderly, which they will start targeting that age group. The health insurance companies are going to stimulate Sports participation. Silver sneakers is a program that the YMCA ran for seniors.

You are going to see reductions in health insurance costs for people that are proving that they are going to the gym. Technology is going to play a bigger role because as we age, the modern senior citizen is becoming more and more tech-savvy and we are going to see eHealth and sports participation go hand in hand.

What do I mean by eHealth? Through Covid, they have been doing a lot of Telehealth and seniors are starting to get used to talking to the doctor on a computer. They are starting to do their videos and log into YouTube. They will be a lot of eHealth functions coming up in the future. We see wearables already in the younger generation but we are going to start to see them more in the older generation.

Sensors, we are moving towards clothes that have sensors. Voice technology, I will be sitting there and my phone will say what did you say? I wasn't talking to you. That is what you are going to hear from "voice", did you get up and move? The seniors will set it on their computer, have it on their watch that starts to buzz. You will see the seniors get involved in this type of technology and using their health and fitness parameters.

Artificial intelligence will start to play a bigger role because not only are we going to be having the wearables, but they are going to tell you, your sodium is too low, you need to take electrolyte. The

algorithms are going to start to build tailor-made programs for seniors. The Sports and Fitness clubs will continue or increase to target senior citizens because a lot of people are not using the gym during the day and that's downtime for them so they can use come up facilities and make a little increase in revenue because they will get more seniors coming in during the day when it is less crowded.

We are going to see senior playgrounds, and those are places specifically made for the older generation to play. In Cuba, I saw several playgrounds and a lot of different people using them. But the senior playgrounds will be catered to some slower or easier things for them to move around, perhaps an obstacle course where they can touch one thing to the next.

You are still going to see people playing golf, fitness, cycling, walking across the country, and doing yoga and Pilates. Those are all going to continue in popularity. But we are also going to see several sports teams. Several team sports become popular, and they are going to adjust to the specific age group. In Europe, they are playing walking football. That one interested me because they are not allowed to run. They are only allowed to jog I think for a couple of steps, but I didn't read the rules to know them well, so you are going to have to check that out. There is one in Australia too. Most countries are starting to pull that out.

There are more Senior Games and Senior World Championships likely to be organized, and I will cover that in a minute. Then, of course, there are senior social platforms. One of my friends is in this group where they tell you when everyone's going to meet at the court, you are going to start to see seniors getting that specific information going. Everybody needed such and such for a walk and there's going to be more education related to health and sports for senior citizens with that healthy lifestyle.

Here we have walking football You can see they are walking as quickly as they can and there's the ball down here. There's the walking football team from Queensland. Now, this is the sport I was telling you about it is driving everyone nuts in America. They are all playing pickleball and it is a shorter court. They can fit a couple of them on a tennis court and they are going nuts and I am seeing a lot of tendonitis issues here because they are reaching.

Look at this lady right here, I think we are seeing tendinitis there too. Wait, I think we are seeing it on her arm too. They need scapular stabilization exercises people. What they are doing is they are just moving their elbow and they are not moving their whole shoulder. As a result, they are so killing their elbow. The first one, I had that came into me was literally in tears when I had to shut her down for three weeks to get everything else to build up. She used to work out all the time, but she got into this pickleball craze. The next thing, she's playing pickleball for two hours, five days a week. She wonders why she's getting tendonitis.

Be aware of that craze because if it is not in your country now, it is common. I Googled International Senior Sports competitions and I came up with the World Masters Games. It is an International Multi-Sport Event held every four years, and it was pretty large. Then I was so sad because it said anybody can participate over the age of 35. That means you are not going to see a lot of people in their 70s running into that one.

Some of the sports say you can go down to 25, I wanted to put a big X through there. Let us not play that one. Let us go and look at the next one. The Huntsman World Senior Games. That began in 1887, it was the World Senior Games and that was the same concept. The founders that came up with it, decided that the golden years were better when good health and physical fitness became a way of life, not just a random hobby. They decided to start a sporting event for men and women over age 55.

What ended up happening was people participated, but they decided they wanted to increase participation, so they drop the age down to 50 for the second year. This is still going. The Huntsman

World Senior Games are played every year in St. George, Utah, they are an International Event. There are over 30 different sports, Japan to Russia has been there, Norway to Senegal. Athletes have come from all over the world and that is the truly largest annual multi-sport. It is annual, it is not every four years like the World Senior Games, it is annual.

Then I checked if there was an International Senior Olympics? Today, the meet is known as the Senior Games or Senior Olympics and they are now held in every state in the United States. It is not International. Perhaps an International Senior Games will be the next trend. If so, maybe that will be the next event for us to work through FICS.

[END]