Introduction

Andrew Schorr:
We are live on AM 570 KVI. How would your life change if you had a terrible accident and suddenly your spinal cord was injured? What can they do for you now? How do you recover? How is your life changed? There are things changing in all this, and we have leading experts ready to talk about it as well as a friend of mine who had this happen to him. It's all coming up next live on Patient Power on AM 570 KVI.

Good morning wherever you may be this kind of gray morning in Western Washington, or maybe you are over in England or in China listening on the internet. Welcome to you, too, wherever you may be. This is Patient Power, and I'm Andrew Schorr. This is the only program on radio or on the internet where week after week we connect you with leading medical experts and talk in depth about significant health issues.

In the news many weeks ago in mid September millions of people watched a Buffalo Bills professional football player have a terrible accident, and then he ended up being spinal cord injured, and a lot of people were following what was going to happen next. Would he be paralyzed? Would he even live? How would he recover? And there were different procedures brought to bear there which are controversial.

We are going to talk about it, and we are also going to meet someone else who I would like you to meet now as today we devote our program to spinal cord injury which affects about 10- to 12,000 Americans, new cases each year, but about a quarter of a million people are living with spinal cord injuries, mostly men, often people in the prime of life. Well, that's what happened to Jamie Osborn, a fellow I have known about 20 years. We went to the same school back east as well. And Jamie lives where I do on the East Side, and he had just had his 50th birthday, and then the week after he was doing what he has done for years, and that is go bike riding with his friends and coworkers. And so there it is, a sunny day in June, and he is bike riding, and then, Jamie Osborne, what happened then?

Jamie:
Well, thank you, Andrew. It's great to be here. My story is a cycling story. And it was a mid afternoon on a sunny day in June, and I was cycling with a group, and we were cycling at a fairly high rate of speed and cycling single file, and a very unusual, freakish thing happened, very sudden and abrupt, where a stick got lodged in my front wheel, and as the wheel revolved around to the fork it locked up the bike. And as a consequence the
bike crumbled beneath me, and I was essentially kind of torpedoed or body slammed directly into the pavement head first and sustained an incomplete spinal cord injury at the level of my cervical spine, at C6 and C7 and at T1.

Andrew Schorr:
Now, you were taken to Harborview Medical Center, and we are going to meet two of the healthcare professionals who have been very important to you in your recovery. And that's what we are going to be talking about today is what happens when you have a catastrophic accident like that. And I know I ran into your wife, Diane, who is listening today, and, you know, just when she explained it to me I knew this was really serious and could be potentially very life changing. Well, this happens all too often, and it could happen, folks, to you or me in a flash, just like it did to Jamie. So he was brought to Harborview.

Let's meet Dr. Jens Chapman who also not only is a leading orthopedic surgeon in Seattle and in the Pacific Northwest and a professor in the department of orthopedics and sports medicine at the University of Washington, but he is renowned as a spinal surgeon. So, Dr. Chapman, it ends up that my friend Jamie is your patient. How do you decide what to do in Jamie's case or just when you start to run through your mind does someone need surgery right away, certain interventions, how do you decide what to do?

Dr. Chapman:
Good morning, Andrew. Good morning listeners. Good morning Jamie. Nice to see you here. You are looking great, by the way.

Jamie:
It's good to be here.

What to do Immediately Following a Spinal Cord Injury

Dr. Chapman:
Going back to the sunny day that he mentioned earlier, the first and foremost issue that we face with spinal cord injury patients is to ensure their survival. I mean this is a life-threatening injury. This is usually accompanied with other injuries, and again our primary goal is to get the patient to survive and to try at the same time to identify the injury extent and to take whatever effective countermeasures that we have at our disposal to try to optimize the outcome.

Andrew Schorr:
Now, it's controversial what to do in the early hours, and my understanding is with Kevin Everett from the Buffalo Bills, there was the thought that there could be some kind of cooling of the spine that could lessen inflammation. Maybe you could explain as best you know what happened there, and why is there debate about what to do, why isn't there sort of a standard approach?

Dr. Chapman:
Well, Andrew, the first and foremost aspect of spinal cord injury care actually without any controversy, standard principles of so-called resuscitation, meaning getting and keeping patients alive, are actually fully applicable for spinal cord injury patients, and those are very effective strategies. So getting the blood pressure as normal as possible to
maximize spinal cord profusion. Getting normal oxygen supplied to the spinal cord. Getting the blood counts, the hematocrit as close to normal as possible and protecting the spinal column with indirect means such as a collar or sandbags are very effective strategies in the very initial encounters.

You mentioned cooling. Again there are a number of early interventions that are being applied nowadays. A lot of people give intravenous steroids, so not the professional athlete’s type steroids, but intravenous, powerful steroids which have been shown in animal models and to some degree in human beings to diminish the amount of secondary, meaning after the initial onset, nerve damage.

You mentioned cooling. It is well known from animal experiments that we can try to reduce the amount of spinal cord damage by cooling nerve tissues. The problem in an acute trauma setting is that cooling down the whole patient is actually exactly the opposite of what we want to do for resuscitation. Everybody who has had a severe trauma actually clamps down and cools down by themselves, and it's actually a very deleterious mechanism that gets unloaded there in terms of patients actually getting sicker from that. So cooling down an acute spinal cord injury patient can produce a very significant--all systems basically shutdown that we really don't want.

Andrew Schorr:
Lots more to talk about that. We are going to take a break. Patient Power, by the way, folks, is sponsored by the institution that Dr. Chapman comes from, and also you will be meeting Dr. Goldstein. That's the University of Washington Medical Center, Harborview Medical Center. Dr. Goldstein, a rehabilitation specialist, another doctor that Jamie depends upon, also works as many UW physicians do at the VA Hospital here in Seattle too.

Much more coming up. We welcome your calls as we discuss spinal cord injury today and also hear about the recovery of Jamie Osborne and the determination he and his family have to having him have a full life. It's all coming up as we continue on Patient Power right after this.

Will I Ever Walk Again?

Andrew Schorr:
Welcome back to Patient Power on KVI. Andrew Schorr here with my guest, my friend Jamie Osborn, who had a spinal cord injury in a biking accident in June, but he is making a recovery. Folks, I want to tell you he is walking around Fisher Plaza here today, and I am sure there were people and his family who thought right after that accident and the friends who were cycling with you would that ever happen. And so we are going to talk about the recovery from these injuries.

Also with us is Dr. Jens Chapman, a spinal surgeon and a very renowned one from the University of Washington and Harborview Medical Center. And then also Dr. Barry Goldstein, who is a professor in the department of rehabilitation medicine. He is at Harborview Medical Center and the UW Medical Center and the VA.

Barry, thank you for being with us. You know, the question that I'm sure any family member or the patients themselves ask when they have had a traumatic accident like this
is, Doctor, will I ever walk again?  Or sometimes, will I be able to use my arms again?  It's not always an easy question to answer, but I am sure you have seen instances over your long career when it looked really bleak, and there was slowly recovery.  Tell us about how you make judgments on that and whether people can have hope that there can be progress.

**Dr. Goldstein:**
Thanks for having me here, Andrew.  And your question is probably the most common question we get because people want to know, will I recover and be able to walk?  Will I recover and be able to use my hands?  And it's a complicated question and one that's difficult to answer particularly when a person has an incomplete injury.  For people who have complete injuries, meaning that there is no sensation and no movement below their level of injury, if there is no regained movement or sensation within the first 48 hours, unfortunately we are pretty good at prognosticating and predicting that that person will not have meaningful function in the future and be able to walk.

But with incomplete injuries we are not as good at predicting, and I think most people have come to the point where they are very cautious in predicting either way.  There have been some interesting surveys and talking to patients and asking them what information were you given early on, and was that accurate?  And it's unfortunately all too common that the early predictions were wrong.  So my own approach as well as most people is to work as hard as you can on your recovery especially for that first year, to have a lot of hope, a lot of support and do everything you can to recover.

**Andrew Schorr:**
Back to Dr. Chapman, so there is this debate about whether to cool down the spine, and that remains controversial.  You talked about the things there is no controversy about.  But what about when to do surgery?  So I understand typically--you know, we in the public think, well, your spinal cord was cut, but I know typically that is not at all what happened, but there can be this compression and pressure.  How do you know when to do surgery to intervene to relieve pressure?

**Dr. Chapman:**
Again we have to take the whole patient into our observation there.  If we cannot free up the spinal cord from pressure, for instance through a fracture that cannot be indirectly through pulling or traction put back into a good position again or if there is bleeding around the spinal cord that compresses it, if a disk is pushing against it, an emergent surgery is our only tool to basically give the spinal cord physically a space to try to recover function again.  In that setting we try to do it as emergently as possible as much as the patient's condition will allow us to do so.

**Spinal Cord Surgery and Recovery**

**Andrew Schorr:**
Now, in Jamie's case, so Jamie, you have been working really hard on your recovery, and we are going to get some of the details of how it is that you can walk now.  You walk with a cane some of the time, sometimes not.  You went up stairs here today.  And, folks, again think back to June and the friends and family were with Jamie who was in the hospital five weeks in intensive care at the very beginning.  It was very unclear whether he would ever walk again, at least in their minds.  And, Jamie, you didn't know what lied
ahead, but a lot of determination. So might he need surgery down the road? So if there is delayed surgery for someone with a spinal cord injury, how do you decide that? And what's the purpose of that?

**Dr. Chapman:**
Jamie's spinal cord injury was a type of injury that we find more and more often, and that afflicts us as we are entering middle ages, and I am being optimistic here, and that our spinal column through degenerative changes becomes overgrown and pinches nerves as we live every single day, and a moderate injury mechanism can even cause a spinal cord injury then. So in Jamie's case we didn't have to acutely intervene. His spinal cord had reclaimed its rightful space, and we could just protect the spinal column through braces and allow a recovery process to take place naturally. However, with this very satisfactory early recovery which Jamie experienced so fortunately we want to wait until that has maximized, and at that point in time we make a couple of new tests to see whether there is anything else to be gained by optimizing the spinal cord passage space with a surgery later on.

**Andrew Schorr:**
And, Dr. Goldstein, you were saying it's that first year, it takes a long time to kind of get a clear picture with an incomplete spinal cord injury as Jamie has had or as Kevin Everett had too from Buffalo Bills of what the full extent is, what you are looking for maybe for many years to come, right?

**Dr. Goldstein:**
Yes. Many of the mechanisms that we have been talking about so far in terms of relieving the pressure on the spinal cord are early interventions, but remodeling and recovery in the spinal cord, these mechanisms go on for months and years. And as they are going on the best treatment for that is to be using the pathways that are recovering in active kinds of ways and stimulate further recovery with things like physical therapy and walking and using the hands. The textbooks say that most of the recovery occurs within the first six months, but we know from repeated observations that it goes on for much longer than that and even beyond a year, but the rate of recovery slows after the first six months.

**Andrew Schorr:**
And no matter what, it takes tremendous determination from the patients themselves. Jamie, I want to hear about that. So you get relief from Harborview and the rehab center there, and you get home and you look around, and there is your wife, Diane, and your two kids, and you say okay, what now? And certainly there are instructions on things you need to do, physical therapy, appointments, medical check-ups, etc. But how did you approach this mentally for you to recover as best you could, and what--your operating system for today, if you will?

**Jamie:**
Well, I will go back to a comment that Dr. Chapman gave me very early on during my stay in the hospital, and it was two words. And it was, Jamie, get independent. I took that very seriously, and I translated it into doing everything that I possibly could in every activity to do things on my own. Even when people would offer to help me, feed myself, hold my utensils, get my clothing, I resolved that I would take whatever time was necessary to do things on my own. Something as pedestrian as taking the wrapper off a straw. Early on I didn't have the fine motor skills to be able to do that. I couldn't pinch
my forefinger to my thumb enough, and it used to frustrate me to no end, but after a couple of weeks of trying and trying and trying, I was able to do it. And even though that seems like a very simple activity, for me it became a little victory, and then it just became additive.

It just became more little victories, more little victories, more little victories, adding up to bigger victories. And eventually I resolved that I wouldn’t go home in a wheelchair. And then after I was able to accomplish that, the wheelchair was taken out of my hospital room, I resolved that I wasn't going to go home with a walker, and I didn't go home with a walker. And now I am able to walk with a cane. I am able to walk somewhat independently on my own around the home. I have a very structured program that I follow at home in doing strengthening and flexibility exercises every day.

The recovery process from an incomplete injury is not a linear healing process. It has ups. It has downs. It has side ways. My neurological system is out of balance, and it's trying desperately hard to find a new normative state, and so for example I fight increasing stiffness all the time. That has progressed since I have been out of the hospital, but I counter that with two lengthy stretching routines that I do every day. There is a combination of different therapies that I do on an outpatient basis. I do physical therapy. I do pool therapy now twice a week. I do some massage therapy, and I do some acupuncture to help with range of motion and flexibility.

There's many other components that come together. I don't want to miss also acknowledging a family and a friendship community and a community of faith that are out there praying for me every day. All of these things are huge factors in enabling my recovery. I visualize for example a lot what recovery of my spine looks like. I think about it. I picture it. When I am in my quiet moments I am thinking about what recovery of my spinal column looks like. I think that the mind is a very powerful component of the healing process.

Andrew Schorr:
Okay. You are very inspiring, and I know for people listening, whether they personally have been affected by a spinal cord injury or know someone or don't, we are pulling for you. We are.

We are going to take another break, and we will be back. We welcome your calls. If you have questions for our experts and then our inspiring fellow who has been living with all this, Jamie Osborne, the phone number 206-421-5757, 421-5757 or 1-888-312-5757. We will be back with much more Patient Power as we discuss spinal cord injury, the treatments and the recovery.

Current Research

Andrew Schorr:
Thanks for being with us this Sunday morning, or maybe you are listening on the internet after the fact. All of our programs, this one included, can all be found at patientpower.info, patientpower.info, whenever you want. Maybe 3- or 4,000 people now go there every day and just pick the one they want. You can have them podcast or delivered to your podcast player, share them with friends. And there really is nothing like it anywhere, and I am very proud to be a part of it. You just, if you were listening with
the commercials there was just an ad for Swedish Medical Center, which is also one of our sponsors along with Harborview and UW and Senior Guidebook, Seattle Cancer Care Alliance, thanks to all of them.

And they were mentioning neurosurgery there, and Jens Chapman, you are at Harborview and UW. Collectively you and your brethren who are surgeons, have you made progress in what you can do? Because this has been really daunting, and people like Jamie, 50, which I still want to say is at the prime of your life, Jamie, and you were zipping along on your bike, but it's often younger men in the prime of their life, and they have their whole life in front of them, and then they have these catastrophic events. Can you--do you have newer approaches or where are you headed in what you can do for them?

**Dr. Chapman:**
A great question, one that we get asked all the time. Obviously next to cancer, spinal cord injury is the one big area that's just really ready for a breakthrough, and we are not there yet, despite all the glamour with the Miami Project and the Gloria Estefan injury and Christopher Reeves Foundation, the spotlight has been put on spinal cord injury. The main thing that we really actually have to do is something you probably did not anticipate me saying, that is prevention, education. All those children that Dr. Goldstein and his team have taken care of this summer who jumped into pools head first, all the sports injuries that are probably to some degree preventable, I think we really have to do a better job at educating the public and preventing injuries. That also goes to gunshot wounds and urban violence and spinal cord injuries. So I know that was not where you wanted to go to with your question.

**Andrew Schorr:**
No, that's fine.

**Dr. Chapman:**
I mean, I feel a strong sense of duty in possibly using this program to make a plug for awareness of spinal cord injuries and just preventing them in the first place.

**Andrew Schorr:**
Okay.

**Dr. Chapman:**
Repairing the damage, again next to cartilage cells, nerve cells are the one cell type that cannot clone itself, thus repair is very limited. The more I have looked into spinal cord injury and the magic and miracle and mystery of nerve cells, the more I have been awed in terms of the construction and the complexity of their networking. Basically why did massively funded projects like the Christopher Reeves Foundation and the Miami Project and our labs also never make any major breakthrough despite what the media always hype up. Not your station, but certain news organizations would do that recklessly all the time, raising hope.

Our nerves cells are actually built to self-destruct after injury, and I don't quite know why. And they also have very effective strategies. And Dr. Goldstein has a very interesting chart that he has put together himself showing how amazingly for some reason intricately our nerve system is trying to resist repair attempts. There are seven major
categories--and I am not go to go into those right now, it would be a whole extra hour--of how the nerve cell system actually further destroys itself after injury, and then basically walls off repair efforts.

The main things that we are right now trying to do are we can optimize resuscitation, we can realign and decompress the spinal cord as fast as possible, and that's where major breakthroughs can happen and miracles can happen. So here in Seattle we are blessed with a phenomenon Medic One system that actually can bring patients back to life and gets hope back for spinal cord injury patients. I am privileged to work in an institution where there is an enormous resource of people that is incredibly efficient at getting the diagnosis and getting operating rooms around the clock ready to make this happen surgically also. Now, surgical intervention strategies are much better also in terms of being less massive and far more pointed towards decompressing the cord.

In terms of cellular regeneration again, we give steroids. We will sometimes locally cool down the spinal cord if circumstances permit, but we will not systemically cool down patients. And this is not an FDA approved strategy I have to add.

Andrew Schorr:
What happened with Kevin Everett?

Dr. Chapman:
I still don't know exactly was done there, but I think that got probably far more air time. I think in his case, as much as I can tell, he had an optimum standard recovery strategy in terms of just early reduction of the dislocated neck, early decompression of the cord bleeding, and just rigid stabilization, and I think that's what I would personally suspect the majority of the positives in this case came about.

We have a number of medications. I don't wanted to mention them by name. I don't want to add to the hype. We are part of a national cord injury recovery program, and, yes, I will voice right here right now there are significant frustrations in the FDA's responsiveness towards us using these kind of medications. I mean, I understand there is a strong need to protect the public in some ways. On the other hand, if we do have desperate injuries, I do see that we are somewhat really hamstrung by abilities to apply these medications. And yes, we are part of one of those programs. Yes, I am not going to mention the name. But there are some very promising beginning changes in the tide against spinal cord injury.

Andrew Schorr:
Okay. Dr. Goldstein, so you have got that chart there. First of all, I never heard that before, that the nerves are not your friend because I think we hear these stories of incredible healing and that your body wants to heal itself, but if the nerves are fighting that, that's a new one on me.

Dr. Goldstein:
I think it's important to put this in some historical context also. It wasn't even 50 years ago when we learned that the nervous system was immutable. Up until then everyone thought that not only did the cells not divide but recovery was impossible, and that turned out to be wrong. And it's only been over the last 40 years or so that we have been learning about this, so it's really in a pioneering stage. People are anxious, and people
want this to move faster than it can, and unfortunately it does get hyped. But the progress that's made will likely be incremental where small stages and small interventions will result until improvements in the injury and the recovery.

For example, Dr. Chapman mentioned earlier that it's been relatively recent that more people have incomplete injuries. That's because of the care in the field. Methylprednisolone is the steroid that's administered early on. So we see now more and more people with incomplete injuries. It didn't cure the problem, but it certainly has been a step forwards. In fact there are many different interventions that are under investigation now that are very exciting, but the question is how close are we with these interventions, and we are likely many years if not decades from looking and ushering through these incremental changes to then hopefully have substantial recovery after spinal cord injury.

Andrew Schorr:
Okay. I have to ask you about one avenue that's very controversial and political, and you knew it was coming, stem cell research, embryonic stem cells to help regenerate, you know, where there has been an injury to the spinal cord. Where are we with that? Certainly California as a state, the people of California are funding research there when federal research couldn't go forward in a lot of areas. What are you able to do here? What's your feeling about it?

Dr. Goldstein:
So just to put this in perspective of all recovery and research, there are those immediate interventions that we have talked about already, and then the longer term interventions, and stem cells is one of the longer term interventions. Cells do die, and they can't reproduce. So taking immature cells that can become nerve cells is possibly a viable way to help with spinal cord injury and brain injury in the future. It's in its very early stages, although in this country progress in recent years has been slower because of some of the political decisions that have been made. But for example there is a group in Portugal. There is a group in China. In fact the group in China has operated already on thousands of patients, and they are taking immature cells, some from the umbilical cords, some from the roof of the nose, they are taking immature cells, putting it in the spinal cord and seeing if they can recover. It's in its very early stages, though.

Andrew Schorr:
I am sure you are asked about it a lot though, and people get on the internet. Let's take another break, and then we will continue our discussion. We are visiting with Dr. Barry Goldstein, a professor in the department of rehabilitation medicine at the UW, and also Dr. Jens Chapman, a professor in the department of orthopedics, an orthopedic and neurosurgeon there. And then we have with us Jamie Osborne, who suffered an incomplete spinal cord injury. We will be back with more Patient Power right after this.

Stem Cell Research

Andrew Schorr:
I just want to help you understand the full scope of what we are doing on Patient Power. So we do the weekly show on KVI. There are those Patient Power Minutes that often run
on KOMO that you may have heard a minute ago, but we are also doing programs throughout the week on the internet. I just want to mention some coming up because they are there for you either live or on demand on patientpower.info.

So tomorrow I am going to do a program with Dr. Michael Roizen from the Cleveland Clinic. He is one of those coauthors of You: The Owner’s Manual, a best-selling book if you have seen it, and it’s on pain management. That certainly applies here too. And then later in the week on a program that I am learning about, neurofibromatosis, complications in child development. So there will be people interested in that. Dry eye syndrome affects lots of people related to their eyes, sometimes a complication of medications. That’s later in the week.

Also, and, Barry Goldstein, you will probably be interested in this from the rehabilitation point of view, going to do a webcast on Tuesday evening at 6:00 p.m. on sexual issues and sexual dysfunction, and certainly that affects all of us sometimes, but it also affects people as they are trying to recover or dealing with certain chronic situations. What kind of sex life can you have even if you have had an injury, even if you have been treated for cancer? So that’s 6:00 p.m. on the internet, on patientpower.info Tuesday.

Let’s get back to discussing in the minutes we have left spinal cord injury, though. Dr. Jens Chapman, as I said, is a noted surgeon, spinal surgeon at Harborview and the UW. So we mentioned a minute ago before the break, Jens, about stem cell research. And that’s always in the news, and it always gets caught up in the political discussion, and people who have spinal cord injury are always very hopeful that there is this huge breakthrough that’s going to come out of it that will let them walk again. For you as a scientist and a surgeon, what’s your point of view on it now?

Dr. Chapman:
I mentioned the corollary to the cancer earlier. Again similar to cancer this is just one of those desperate conditions affecting patients' families, but also the medical community. I mean we are desperately looking for something. And what I want to tell basically the public is to beware of the charlatans and the opportunists, whether they are medical people or politicians, who unfortunately prey on desperation and desperate people. And again singling out stem cells, I mean, I have had a lot of concern about some of these projects in some of the countries that I mentioned, and I very much want to warn people that I've seen many, many patients dump hundreds and thousands of dollars into cares offshore, and then come back basically with infections and desperate.

On a cellular basis stem cells are not the ideal answer. We can fill a vacuum or a dead space with some very immature, possibly dangerous nerve cells that cannot function properly. The magic and miracle of the neurologic system is its incredible organization, and we are nowhere close to, I think, reorganizing immature cells. So that specific strategy and some of those offshore, I’ll call them sometimes opportunists, I would really watch out for. We are always very happy to give advice through Dr. Goldstein’s partners and him or us in terms of what we think are reasonable projects and what are not, and we obviously hope that we can have projects here politically sustained also.

And Andrew Schorr:
Okay. Thank you. Well said. So, Dr. Goldstein, for you and Jamie now for a few minutes. So whether or not there is something around the corner or ten years out, so
now folks like Jamie or Kevin Everett from the Buffalo Bills, they are in a hopefully recovery stage where things can improve. It takes a lot of work, but day after day they are living with some disability to a greater or lesser degree. How do you live with these injuries? How do you go on? And what do you need to be attentive to and what’s required of you and your family so you do as well as you can?

**Dr. Goldstein:**
So far we have been talking about cure and recovery after spinal cord injury, but just as you mentioned when people go home and all is said and done, life goes on. And I always try to ask people and understand what are those things that give their life meaning? And what gives people’s lives meaning is the same thing after a spinal cord injury as before a spinal cord injury, and that includes work and play and leisure and spirituality and relationships. This is not an injury that happens to a person. It affects everybody around them in profound ways.

You mentioned before about Tuesday night you will be talking about sexuality. Having a spinal cord injury affects intimacy, erectile function in men, fertility. These are topics, these are issues in our lives that are so critical. It is where we live, and it's the most important thing that we can be talking about. How do you live with a spinal cord injury is the same as before a spinal cord injury except life is very complicated, and life is sometimes struggling against your body, as we heard earlier, that's trying to achieve a new balance and recovery.

**Recovery & Rehabilitation**

**Andrew Schorr:**
You are in the rehabilitation field, and so you have a long-term relationship with people who have these catastrophic injuries. So some of it's about the pain. Some of it's about the mobility. Some of it's about—I imagine you have chats with people and their counselors and others that come there, about your head as well and about your relationships, just the whole picture.

**Dr. Goldstein:**
Yes. And for me the best education I ever had was in getting to know World War II veterans who have lived now more than 50 years with a spinal cord injury. They were told they would die. They were told to get your affairs in order, and then they continued to live for many decades longer. And you learn from people who have lived with a spinal cord injury for many years what's important and how they negotiated life after that.

**Andrew Schorr:**
Well, you must have a very dedicated team, Barry, and I can hear your dedication in your voice.

**Dr. Goldstein:**
Well, thank you, and it is a remarkable team.

**Andrew Schorr:**
Yes. And from your side of it, Jamie, as a patient you experience them working with you, and then you have all this work you are doing at home in your head, in your body, and with your family. What’s your vision of the future? You talked about your vision of trying
to heal things day by day, but when you think about working, relationships, you know, you have got younger kids, you know, Alana is just in the eighth grade I guess now, wanting to maybe dance at a wedding someday, you know. What's your vision of the future?

**Jamie:**
Well, the first thing that I would say about an incomplete injury is that there is a very broad spectrum of recovery potential. And for me that's my hope. And the goals that I have and the hopes that I have going forward are to go back to work and to be able to be fully engaged and productive at work, to drive again, to be able to ski and to be able to ride again, to be able to play basketball with my daughter, to be able to attend my son's cross-country and track meets, to be able to be there emotionally and physically for my wife. And I have every confidence that I will be able to achieve those based on the strategies that I have talked about before.

If there was one thing that I would offer to the listening audience out there is that recovery from this injury is hard. This is hard, hard, hard work, far and away the hardest thing that I have ever done, and I have a fairly long history of pretty intensive training physically, and this exceeds this in every aspect. But when I go to bed at night I make sure that I take a moment to be grateful to myself and to thank myself for the efforts that I have been able to put forward to get through the day because getting through the day is a struggle. It's not perfect. I have my ups and downs. But I make sure that I am grateful to myself. And I guess that's one thing that I would offer to other spinal cord injury patients out there is I am sympathetic to the struggle, but don't forget to thank yourself.

**Andrew Schorr:**
Yeah. Amen. I wanted to mention, ask Dr. Chapman about one thing. So you see patients who have an injury, and you see them when there has been all this trauma, and first the concern about will they live and then to what extent will there be recovery, when will they get out of the hospital. And there is a flurry of activity, and family members fly in from around the country, and people in church pray for them or in synagogue or whatever support group they may have. But is there anything you would say to family and friends to support people long term?

**Dr. Chapman:**
It's a great question, Andrew. Indeed it is especially in our society customary when people are initially injured to just show a massive outpouring of support. I mean, the hospital rooms are filled and overflow with flowers and get well cards, and helium balloons occlude the ceiling. It's remarkable. What I have seen in spinal cord injury patients more and more commonly is basically then this outpouring ebbs off after about a week or two, and then a month later when these patients are on rehab they are alone in the hallway somewhere in a wheelchair just sitting around. Not actually so much in our facility because they are kept enraptured, but it's a common phenomenon that they are basically just left alone later on.

So my advice if there is, god forbid, a circumstance of a cord injury is to minimize the initial outpouring in terms of very important, but short symbolic visits, and then make a commitment to these injured people to stay in touch and go on a regular visitation schedule. Basically have your outlook calendar ready and get a time slot and then make a
firm commitment, and you are going to read or whatever you can do, play a video game, talk, chat, watch videos, do something down the line to stay involved in these friend's or loved one's affairs and help them that way.

Andrew Schorr:
Good advice. We are going to take our last break. We will be back with some final comments as we continue our discussion on spinal cord injury on Patient Power right after this.

Andrew Schorr:
I want to mention that next Sunday right here live on KVI we are going to discuss one of the scariest skin cancers, if you will. It starts in the skin, but develops, goes elsewhere to organs. That's melanoma. And we are going to have with us Dr. David Byrd. So we want to prevent melanoma. We were talking about preventing spinal cord injuries. Helmets, you know, I was over in Amsterdam. Millions of people ride bikes, no helmets. It's really scary. Fortunately we have done better here. Parents, if you have your kids wear a helmet, you wear a helmet too. Come on. Let's get real, right? We will talk more about prevention on another show too. So that's next Sunday.

I just want to get some final comments. So first of all, Dr. Jens Chapman, I want to mention he is at The Spine Center at Harborview, and that's a whole interdisciplinary group, so it's you and your team of surgeons, but other specialties as well, right, Jens?

Dr. Chapman:
That's right. We emphasize a collaborative effort with rehab medicine, and we have physiatrists basically working shoulder to shoulder with us, and we are orthopedic and neurological surgeons together and neuroradiologists.

Andrew Schorr:
The Spine Center at Harborview. And, Dr. Goldstein, you are with the rehabilitation medicine department, and you are both at Harborview and the UW Medical Center. Okay. Well, great resources for people. Thank you both for being here. And, Jamie, we wish you all the best. We are going to keep in touch. We are going to post your blog address on patientpower.info. People can know what you are thinking and know how you are doing. Okay?

Jamie:
Sounds good. Be happy to.

Andrew Schorr:
Well, I know for your friends who've worked with you, I am sure the group that rode bikes with you, they are following you every moment, every step of the way. And I think great advice that Dr. Chapman had is, people, just keep in touch. And, you know, you can bet I will too. Thank you so much for being with us.

This is what we do on Patient Power week after week. So we welcome your suggestions for topics. Remember that we are going to talk about sex on our webcast on Tuesday evening. We are going to talk about chronic pain tomorrow morning at 10:00 a.m. It's all
on Patient Power. There are over 400 hours of programs, and this is what is all available to you there, and it can be podcast. I have to figure out how to sign up for a podcast. I have to do it myself. And there are instructions on the website for you.

Jamie, so we are going to play basketball someday.

Jamie: We are going to play basketball someday. You can plan on it.

Andrew Schorr: All right. That would be so neat. And I want to thank your family for you coming down. It was as I told you doctor's orders that you get up early, get things moving. Folks, he was climbing the steps here today, and really I think a wonderful tribute to your determination and I am sure of the really good care you have gotten. As always, folks, knowledge can be the best medicine of all. So now you know more about spinal cord injury and the recovery. Let's hope Dr. Chapman, Dr. Goldstein and their colleagues around the world can make a breakthrough in spinal cord injury, but it's all the hard work that the patients do every day, and our hat's off to them. Andrew Schorr saying have a great week.

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