

Carlecast #2 – Back Pain

Dr. David Graham: Hello again, I'm Dr. David Graham. Welcome to Carlecast number two. Glad you decided to join us again for this episode; we've got something really fun and exciting for you today.

I've got Dr. James Harms, one of our spine surgeons from the Carle Spine Institute here to talk to us today about back pain. Hopefully you'll notice a little bit of difference and improvement in some of the production values of today. I'll talk a little bit more about that at the end of the show, but for now, let's go ahead and talk with Dr. Harms.

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Dr. David Graham: Good afternoon. I'm here this afternoon with Dr. James Harms, a board-certified orthopedic surgeon and member of our multi-disciplinary spine clinic here at Carle. Good afternoon, Dr. Harms.

Dr. James Harms: Good afternoon, Dr. Graham. It's a pleasure to be here.

Dr. David Graham: So we're here to talk today about back pain, certainly one of the scourges of many peoples' lives. A few topics I wanted to just talk about in basic, and why don't we start with something nice and simple, like how do you keep from getting back pain?

Dr. James Harms: That's the million dollar question. Most people have back pain because they have degenerative disc disease. That means that the discs are aging prematurely. My theory is you ought to have perfect health until you're 100, and then fall into a pile of dust. Unfortunately, it doesn't usually work that way.

Degenerative disc disease is back pain with activity particularly that which you're not accustomed to. Most people, probably 80 percent, would have an episode of back pain due to degenerative disc disease some time in their life. We think that the major reason that people have such problems is genetic. Things like this tend to run in families. If your mom had back problems, or your uncle had back problems, you're more likely to have the same.

We think that people who are more than 20 percent over ideal weight have a higher incidence of back problems. People who smoke cigarettes are at risk. We think that people who don't get regular exercise, people who have weak abdominal and back muscles, are at risk as well. People that spend more than an hour and a half a day in a vehicle, or people who have a desk job and don't exercise are all at higher risk of getting back problems.

Dr. David Graham: So, now you're working around the house, you're lifting some boxes, you're raking leaves and your back starts to hurt you like crazy, and

you've never had anything like this before. What do you do about it when you're at home?

Dr. James Harms: Well, from what you're describing, somebody did too much all at once. They suddenly increased their activities and overloaded a weak area of the back. Hence, that part of the back is inflamed or irritated. A number of things are possible, from a self-care point of view. Obviously, moderating the activity can be quite helpful and not do quite so much. Advil or Aleve are very good choices, both as pain medications and to decrease the inflammation in the back. Tylenol's a good pain medication, too, but doesn't have quite the anti-inflammatory effect.

Self-care could also include ice or heat. People ask which is the best, and I tell them to try both and whatever helps most, that's what they should do. Maybe twenty minutes on, twenty minutes off to start with. The Carle Spine Institute also has a home remedy book that we're happy to send out to people if they'll give us a call or send us a note and request it. So those are the usual things that people can do at home under those circumstances.

Dr. David Graham: Now with basic back pain, we're all fairly familiar with it. "It hurts, I don't like this." Is there something about the pain that a person would recognize to say, "This is more than the usual back pain. This is something I'd better get checked out?"

Dr. James Harms: Let's spend a minute on the types of back pain. I've already talked about degenerative disc disease, which is back pain with activity, particularly something you're not used to. Then there's an arthritis-like pain. Arthritis would cause soreness and stiffness when in one position for a long time. So if one gets up in the morning, and the first couple steps are difficult, after a long car ride if it takes a while to straighten up, that would be arthritis.

Those two should be distinguished from fracture pain, usually after a fall or if one has osteoporosis and has a violent cough or sneeze, one can get a fracture. In general, that's pain with changing positions. Once you're in a certain position it's not bad, but getting up or down is a problem. If a person has that kind of pain, that would be the kind of thing that one would want to call their physician about.

Also, there's another type of pain that is with a person all the time, and usually worse at nights. In general, that could be from a tumor or from an infection, and that kind of complaint deserves mentioning to a physician as well. If a person gets numbness in the butt or groin region, weakness and pain in both legs, that can be a massive herniated disc and needs immediate attention, usually surgery within the first 24 to 48 hours. So, those are some of the red flag type of things that we think of.

Obviously, if a patient has degenerative disc disease and gets bad, incapacitating

pain, where they can't get off the floor, medical attention can be needed even for that, although usually, that would be medications.

Dr. David Graham: So, you've got either pain that doesn't go away, or you've got some of these signs that make you worry about this being more severe than your typical back strain, and you decide to go in and see either your regular doctor or a spine specialty clinic. What kind of things might you expect to have happen, or maybe even should you expect to have happen when you go in to get this looked at?

Dr. James Harms: We generally recommend that for a routine problem, a person go to their primary care doctor. Back pain can certainly come from back problems, but as you know, kidney infections can cause back pain, aneurysms can cause back pain, hip arthritis can be interpreted as back pain, prostate problems can present as back pain. Plus there are a myriad of other problems that give back pain. So usually the best place to start is with the primary care doctor.

Whether you're coming to a primary care doctor or the Carle Spine Institute or an orthopedic surgeon or a neurologist or neurosurgeon, the same thing is going to happen. First of all, there will be a history taken and examination done, and then review of any X-rays or scans that are available. For the routine back problem, no X-rays or scans are needed, but if a person does not improve as expected or has some of those other signs that I have mentioned, then a regular MRI, a CAT scan or an MRI would be warranted.

Enough information is collected by the physician to give a diagnosis and usually some treatment options. So, a person should go out of the doctor's office with a rough idea of what could be done and a plan.

Dr. David Graham: What kind of treatment options might you hear about when you go see a physician?

Dr. James Harms: Many patients will merely need a diagnosis, some information about the process that they will go through, and time. Many patients will need some temporary things to help them out, to get them through their painful episode while they're waiting for their body to heal this. That could be heat, ice, massage, physical therapy modalities, some manual medicine techniques, pain pills, muscle relaxants, brace, corset; different things work for different people.

A lot of patients will be sent to physical therapy for some pain-relieving exercises, or occasionally, some modalities. If a person has a severe problem, if there's pressure on the nerves, an injection might be given such as an epidural steroid injection to coat the nerve with a long-acting cortisone-like drug to make the patient feel better while he or she is waiting for their body to heal this. If it's a severe problem and it doesn't respond to non-operative therapy, then the patient might be a candidate for surgery. But most of us keep surgery for a last option.

Dr. David Graham: Which I'm sure a lot of us are really grateful for. Now, for many people, the whole notion of surgery on the back is a pretty scary idea. Are there some new things that are coming down the road, some exciting developments that might make surgery less invasive, less a problem or it might even just be a whole new way of looking at things?

Dr. James Harms: The technology boom in spine is wonderful. In the old days, and pretty much now, for the routine patient, we can pluck out a piece of disc and help a person with their extremity pain. We can take out a spur, and we can help with their extremity pain. We can fuse a segment or two of the spine and stop motion to help some of the pain from degenerative disc disease. But these are done under very specific indications and are not appropriate for very many patients.

On the horizon are a number of things, and in fact, a couple of new ones have come up in the last couple of years. A kyphoplasty, or injecting cement into a broken bone, can often help an osteoporosis fracture, or even some fractures from tumors. The FDA has recently approved a total disc replacement, and that can be done in patients with isolated degenerative disc disease who have failed non-operative treatment. Unfortunately, there are not many insurance companies in our area that are covering it, but that should be better in the near future.

Bone hormone can now be used to put in with cadaver bone or artificial bone instead of using a person's own bone. As I tell patients when I do a spinal fusion, and harvest bone from their hip to put in along their spine, they're going to curse my name every step they take for about two weeks, just from me peeling the muscles off to get to the bone. So in some cases, that's no longer necessary.

There are surgeries that are being done through the scope. For example, some spinal fusions from the front of the spine can be done through an endoscope. There are minimally invasive spine fusions that can be done from the back of the spine as well, particularly if coupled with the use of that bone hormone that I mentioned.

There are cells being taken out of discs, cultured, having certain DNA put into them and being injected back into the spine to help re-grow a new disc. That's being done in animals, not in humans. There's also a replacement just for the center of the disc. You'll recall I mentioned a total disc replacement, and that's a big surgery through the front of the spine where you have to move the big artery and big vein out of the way to get to the disc. From the back of the spine, one could conceivably put a gel pack-like substance into the disc space that would imbibe, or absorb water, and form a new nucleus or center of the disc and hence help with degenerative disc disease pain. That currently is being done in animals, but not in humans, is my understanding. So we've got lots of neat things that we'll be able to do in the future.

Dr. David Graham: Sounds like your life's going to get a whole lot more exciting in the next few years.

Dr. James Harms: I suspect that's an understatement.

Dr. David Graham: Well, Dr. Harms, I'd like to thank you for your time this afternoon. Very informative, and maybe we'll come up with another reason to talk with you some time down the road.

Dr. James Harms: It would be my pleasure, and I'm impressed that you're doing this to help with patient education.

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Dr. David Graham: Now it's time for the fun science story. Stories that may not directly apply to what's going on in medicine, may have a bit of something to come in the future, but are just kind of interesting to hear and think about. This one deals with how we see. Do we need our eyes to see? Can we see without real vision?

There are some scientists, fortunately enough, they don't exactly tell you where these guys are working, because I don't know that I would really want to find them, who took some volunteers, some brave volunteers, some foolish volunteers, and rendered them blind. They did this by using a magnetic stimulation to an area of the brain that determines what you see call the visual cortex.

So basically, with a short pulse of energy called a transcranial magnetic stimulation, they rendered these people, in essence, blind for a period of time. The patients say they could not see. Then what the scientists did is they sat them in front of a computer screen, and said, "Do you see a line? Horizontal or vertical? Do you see a dot? Red or green? Every time they asked one of the volunteers, they said they didn't see anything. Then the scientists had them guess, "What do you think it is? Do you think it's horizontal? Do you think it's vertical? Do you think the dot's red? Do you think the dot's green?" And this is where the interesting things came into play.

Remember these people said they couldn't see anything, but they guessed whether that line was horizontal or vertical right 75 percent of the time. They guessed whether the dot was red or green 81 percent of the time. Now, if you were expecting this to come purely by random circumstance, you'd expect a 50/50 chance of getting it right in either one of those two guesses. The color of the dot, which way the line was pointing.

The fact that they could see, or guess, which way the line was pointing, which color the dot was, meant that there had to be something more going on than what that person could what they were "seeing." We've certainly got a lot more to learn

about how we see.

That brings us to the end of Carlecast number two. We hope you've enjoyed our interview. I really have to thank Dr. James Harms. All of the doctors I'll be talking with through these series of casts will be taking time out of a busy schedule, at times their families certainly probably wish they could be home, so I can't give them enough appreciation for the effort they're willing to put into this along with me. I hope you get some pleasure out of it.

What we'd really like to do is certainly get to the topics that you'd like to hear. If there is anything you'd like to hear us discuss in the future, I've got some interesting things lined up that I'll tell you about in a minute. If there's something you want to hear about, give us an email at mail@carlecast.com.

The topics I'm looking to touch on in the future would include just some good, basic kinds of things like lipids. What's all the fuss about them, how low do you need to keep them, and what good does keeping them that low do for you? We've got some interesting talk on depression; we've got some discussions coming up on sleep apnea. Certainly something that's not as recognized as it should be, and probably could improve a whole lot of peoples' lives if we were to get it taken care of. Even things that may not be quite as nice to talk about, but are certainly important issues and issues that people want to hear about, even something along the lines of female incontinence. All of these will be discussed by physicians that are specialists in the field, so you know you're going to be getting the most accurate information possible.

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Once again, we need to thank the supporting crew that helps me out in getting this done, our folks who are putting the web page together, which looks fantastic. Also, I have to thank Derek Miller. He's the fellow who's done the music that you've heard this evening from some recordings called "The Pen Machine Sessions." All of this music is, in fact, podcast-safe, and can be accessible through the Podsafe Music Network. Once again, this is Dr. David Graham, asking you to stay healthy.