When The Doctor Says This Won't Hurt A Bit — And Incredibly, It's True

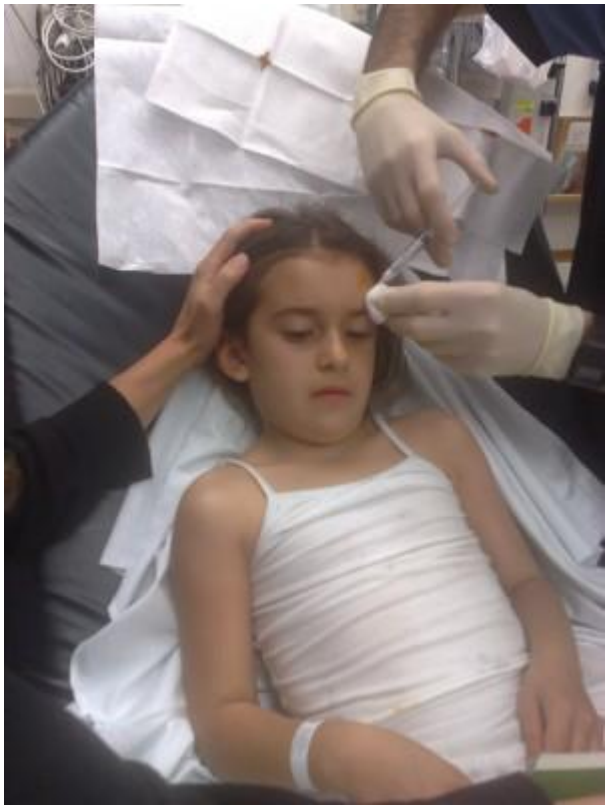
Rachel Zimmerman

In May, my six-year-old daughter, Julia, smashed into our front door handle and got a deep, bloody gash in her forehead.

We rushed her, head wrapped like a tiny mummy, to the medical center at MIT, where we generally go for pediatric care. Julia wept while the nurse cleaned and examined her lacerated skin. After a short exam, she sent us to the emergency department at Children's Hospital Boston for stitches. "How bad is that, generally?" I asked, having never experienced suturing either for myself or my cautious, risk-averse, older daughter.

"It can be traumatic," the nurse said.

Julia cried, "I don't want stitches."



It's a large needle, but Julia is too busy coloring to notice.

So I braced myself for the worst: an endless wait and nerve-wracking bustle; screaming, germ-laden children and brusque, end-of-shift staff. But more than anything, I dreaded the inevitable pain in store for my small child with the deep cut.

(I know, kids get banged up on the path to adulthood and some pain is unavoidable. Still, when bloody heads are involved, I tend to overreact.)

Indeed, I was in full Mama Bear mode when into our exam room strode **Dr. Baruch Krauss**, the attending physician that evening.

Dark, lean and intense, Dr. Krauss shook my hand and then went straight to Julia, complimenting her pink, sparkly shoes. She lit up and was eager to chat. They talked about exactly how old she was (nearly six-and-three-quarters) and what she likes to do (climb trees). Then he gently rubbed a bit of Novocaine gel on her cut and said he'd be back.

I hovered nervously around Julia, checking and rechecking the cut and generally exuding anxiety, while my husband sat quietly, telling me to calm down. Sure, that'll work.

Five times over the next 40 minutes or so, Krauss came in and re-applied the anesthetic, gently squeezing the site with his thumb and forefinger. Why, I wasn't sure. Was it a dosing thing? Was he just numbing the wound even more before the scary stitching began? With each visit, he engaged Julia to learn something new about her. For instance, she loves to draw.

And, she loves snacks. On my way back from the cafe with treats, Krauss stopped me in the hall and said something like, "I'm going to stitch her up; it really won't be bad." I rolled my eyes. But, he added, "I need you to work with me. I'm going to give you a task." Fine, I said, though the whole thing sounded a little gimmicky.

Krauss returned with an oversized 101 Dalmations coloring book and a handful of Magic Markers. He opened to a page overflowing with dog outlines. "Julia," he said. "I want you to color each dog's ear a different color, OK? Which color do you want to start with?"

"Purple," she said, grabbing the marker. Focused, driven and completely oblivious to the large needle now going into her head, Julia colored in dog ears for the next 30 minutes. (This is a kid who, when awaiting her first flu shot, sprinted down a hallway until cornered by three nurses.) Every once in a while, Julia checked with Krauss to see if he approved of the colors. Great, he said. "Now, their paws. Each a different color."

My job was to hold the coloring book up straight.

My husband took video. (That was his stress-reducing task, I suspect.)

As Julia drew, Krauss stitched, about five or six tiny loops in her head. He continued to chat with Julia about the picture and her color scheme; then he'd return to stitching. Soon, it was over. Julia finished her picture and signed it: "To Baruch, Love Julia."

As we left the hospital, hand in hand into the night, my daughter looked up at me and grinned. "Well, Mama, at least I didn't have to get stitches." I looked back at Julia, with her bandaged head and big eyes: "But honey, you *did* get stitches." "Really?" she twirled. "Well it was fun." And she jumped into the car.

The entire experience was so profoundly different from any other medical encounter I've ever had as a mother. I understand that in an emergency, the priority is to fix the damage as fast and efficiently as possible. But Krauss offered such a higher level of care that I wanted to know more.

So I Googled him, and my mouth dropped as I read his profile: "Baruch Krauss' research focuses on pharmacological and **non-pharmacological techniques for relieving acute anxiety and pain in children undergoing diagnostic and therapeutic procedures in the emergency department**… (my bold).

We'd won the ER lottery with this guy. It was like going in for your regular, ho-hum therapy session and finding Freud. This doctor chose my priority as his priority: to spare my child from pain.

But the story isn't over.

About a week later, our home phone rang at around 9 pm. It was Baruch Krauss. "Hi," he said. "I'm just checking in to see how Julia is doing." He was interested in how the wound was healing, but also about her experience in the ER — her memories and the language she used to describe the treatment. Honestly, I said, she loved it. She said she would go back to the hospital any time.

> About a week later, our home phone rang at around 9 pm. It was Baruch Krauss. "Hi," he said. "I'm just checking in to see how Julia is doing."

After our conversation, I hung up thinking this guy is too good to be true. Sure, any decent doctor at any children's hospital in the country might comment on a kid's sparkly shoes, and try to engage on the child's level. "But," says Gary Fleisher, Pediatrician-in-Chief and Chair of the Department of Medicine at Children's Hospital, "the more sophisticated techniques that Baruch practices are not widely used. I don't think anyone is as good as Baruch."

So, why aren't all medical interactions this way? Why isn't pain reduction, particularly for children, a priority for all doctors? When I told this story to a friend, she said her kid recently needed stitches at a public hospital in Mexico City where the staff put her son in a straitjacket and sutured him swiftly, without even a local anesthetic.

Again, Dr. Fleisher said: "You can only focus your energies in so many directions. Maybe at another hospital what they've done is put a lot more effort into brightly painting the ER or painting murals on the walls, and maybe in another place they worry about the noise levels and try to minimize that. There are hundreds of things that are not life and death aspects of medical care. You've got to focus and prioritize."

It turns out Krauss has been focusing for more than 20 years on how to minimize acute pain and anxiety in children undergoing medical procedures. "I first became interested in it when I was working at Cambridge Hospital in the late 1980s," he said in an interview. "At that

time there really was no emphasis on managing pain in children. And I witnessed children going through procedures, and they were really suffering, not only from pain, but also, more so, from anxiety and stress. And at that point I became really committed to doing something about that."

But the seed had been planted long before. Krauss grew up in Woonsocket, Rhode Island where his father was the rabbi of the Jewish community. "In his later years," Krauss told me, "he became the Jewish chaplain at Memorial Sloan Kettering in New York City focusing on death and dying counseling. I learned compassion from him and an acute sense of identifying people who were suffering or in distress along with a desire to comfort them."

That explains the post-stitches phone call. "I try to call most of my patients, especially those that I do procedures on, to find out how they are doing and to have a sense of what their experience was like," he said. "I have had many patients return to the ER who I took care of years before and tell me that what they remember from their experience is the task that they became involved in. It is very gratifying to know that I can help children not only with their injuries but more importantly in shaping their experience and their memories of that experience as painless and non-traumatic. My father would be proud."

Krauss, who trained as a clinical psychologist before turning to medicine (and also has a Masters degree from Harvard Graduate School of Education) is well-known at Children's for his rather unorthodox techniques, among them hypnotizing children using a combination of relaxation and desensitization methods to shift kids' attention away from their traumatic injury and pain. He's an expert on both pharmacologic and non-pharmacologic techniques, and wrote the book on**pediatric sedation and analgesia**.

Krauss and I talked for about an hour at an office at Children's last month. Here, edited, are the top pearls of wisdom he shared.

How Children Feel Pain: The Evolution

There was a lot of dogma that we had in medicine until about 25 years ago, 30 years ago, that… newborns didn't have the neurophysiologic apparatus to experience pain. So procedures — and I'm speaking about major surgeries — were done on these newborns with sedation, but without pain medications because that was the dogma, that was the belief that they really didn't experience pain. And then there was also the dogma that when young children — if they experience pain, they experienced it less intensely than adults, and they didn't remember the pain. Now, any of us that are parents know that that's really not the case. And it took us a while from the medical point of view to arrive at that awareness.

Treating Children Means Also Treating Parents

With pediatrics, we're…not just dealing with a child, we're dealing with a dyad. We're dealing with a child and parent. And as we all know as parents, there is a broadband, wireless, emotional connection between the parent and the child, and it goes both ways. The child is sensing the parents emotional state in a particularily stressful situation, and the parent is sensing the child's emotional state. And they kind of feed off each other…I'm always very tuned in to the emotional state of both the child and the parent because if the parent is very anxious, [the child may be] picking up from the parent through that emotional connection and it's shifting their emotional state.

Adults Like To Know Exactly What's Going To Happen; Children Not So Much, Or The Curious George Effect

Over many years of observing children and their response to fear and anxiety, particularly young children, I've come to the conclusion — and I think this has been quite validated in the neuropsychology literature — that young children have great difficulty processing preparatory information. What you would do with an adult is…Let's say you had a cut and we needed to suture it, then obviously I would explain it to you, almost a variant on informed consent. I would explain to you what's going to happen, what we're going to do, etc., before I did it so you are prepared for the procedure. And the theory behind that is that calms adults. Not only is it ethically important to tell them, but it also has a calming effect because they know what's going to happen, they have all the information, they can prepare.

Well, my experience has been that if you look carefully, many practitioners are still using that approach with young children. And my experience has been that that produces the opposite effect in young children. To tell them what's going to happen, it makes them more anxious and less cooperative because if you're talking about a young child…they can't cognitively mediate their anxiety. Right? You go to the dentist, you may be concerned, you may have a little fear, but you can sit in the chair. Children under five can't do that. As soon as they're afraid, they can't cooperate.

So everything I do is focused on a completely different approach. And that approach is, instead of preparing them by telling them what's going to happen, I prepare them by shifting their awareness away from the source of their pain and anxiety.

(I call this "The Curious George Effect." Remember the 1966 classic, Curious George Goes To The Hospital, in which the little monkey swallows a puzzle piece that must be surgically removed? The most memorable moment of the book is when "the pretty young nurse" approaches George with a large needle and says, "This is going to hurt George, but only for a moment," and he screams before the needle even touches him. I think this is what Krauss means when he says young children, or monkeys, can't "cognitively mediate their anxiety.")

Needles And Stitches But No Pain

You must be able to establish rapport. I think before you do anything, you have to establish rapport with the child. And that's a relationship of mutual trust and emotional affinity. That's a Webster's definition. Well, what does that look like in a…child? What that looks like is me tapping into that emotional connection between the parent and the child, and being able to accurately assess the parent's level of anxiety and the child's level of anxiety. Then I can go to work. So, that's the first thing I do. And I can begin to gauge that right when I cross the threshold into the room.

So if the child is sitting on the stretcher and the parent is sitting a chair reading a magazine, then that tells me a lot about the level of anxiety, as opposed to, I walk into the room and the child is clinging to the parent. Yeah? That's a different level of anxiety. So I'm already making an assessment of the level of the anxiety of the dyad as I cross the threshold.

Treating Julia

Here's where Krauss talked about my specific situation:

Krauss: So, when I walked into the room, one of the first things that I did was to assess the situation, and it seemed like there was a fair amount of parental anxiety, and that Julia was sort of in a funny state. On the one hand, she in her own experience was not particularly upset, yet she was getting a message down this emotional connection that something very anxious was going on, and something might happen. So, the first thing I had to do was work with that.

Rachel: *My apologies.*
No, you were acting normally as a parent. That comes from your protective mechanism. You want to protect your child, you want the best for your child. You're concerned in a certain way. Sometimes with the parents there's a little guilt mixed into that because they turn around for a second, they turn back and something happened to the child, and then they're in this situation where they feel helpless because they don't know the system. So all that has to be taken into account.

Now, as you noticed, the first thing that I did with Julia was I said, "Hi, I'm Dr Krauss." Then I immediately started talking about how nice her shoes were…and they seemed to match her shirt, maybe that's a color she seems to like. All that is about establishing rapport, and shifting her awareness. Because now, it creates a sort of confusion for her. She's expecting me to go right for [her head] yet why am I talking about her shoes? Well, confusion is sort of the beginning of a hyper-suggestable state. So this is a beginning of a way to begin to make contact.

Then you notice that what I did was, instead of placing the topical anesthetic on and just leaving it and coming back in 30 minutes, I came back every 5 minutes and I applied it.

What was that about?
It was just Novocaine jelly; that's all it was. And the reason I did that was because it's important for me to desensitize her. I'm a stranger, I wanted to desensitize her to my touch and my presence. So every 5 minutes I came in, and you notice the first time that I did that, the first couple times, she'd look up, and she'd be concerned about it. And then by the 4th or 5th time, she really wasn't paying any attention to that.

At the same time, I was gauging what she was interested in. Now for her, it was relatively straightforward because I recall she was drawing. And so I sort of validated, is that what she's interested in? And then I used that to focus her attention. So here I am desensitizing her to my touch because that's where I'm going to be spending my time. So by the time I got back in there, after about 30 minutes, the other thing was that she was not particularily concerned with what I was about to do, she was more focused on the coloring. Then I gave her some tasks to work on —

You brought her a coloring book.
I brought her a new coloring book, and I very specifically said to her, can you color that color in this way, so I'm focusing her attention, and drawing on certain developmental tasks she's already working on herself to master. Can she color just around the eyes? The fine motor coordination. Can she do these kinds of things. So these are all going on, and at the same time a very interesting thing is happening, which is that as I'm working with her, her anxiety is decreasing. That gets transmitted up the emotional connection, and then you and your husband begin to relax, that gets transmitted back to her.

Julia is now fine; her wound is healing nicely. (Photo: R. Zimmerman)

The Anxious Parent

The thing I have found with parents is that sometimes at the beginning, parents want information: 'What are you going to do to my child, what's gonna happen,' etc. And I find that addressing that first thing is counter-productive because if I'm talking to the parents, there's almost nothing I can say, particularly if I'm doing a procedure on the child, that's going to calm them down. They get more anxious, that gets communicated down the emotional connection, and that makes it harder for me to establish an emotional connection with a more anxious child.

But what happens is, I always wonder, where does the notion of competence come in? In other words, we are strangers. I'm coming into a room, you don't know how competent I am, and I'm going to do something to your child. And I think some of the granting of competence is the change in your child's emotional state…I've never had a parent where I'm working with the child, the child's anxiety comes down, they're being very cooperative, we're in a rapport, and that gets transmitted up the emotional connection. At the end, the parents never tell me, "Well what are you going to do? Why didn't you tell me this or that?" It's self evident. They experience it.

I was outside the room getting her something to eat, and you told me that you were going to give her a coloring book and you asked me to just go with it. So you got me on board a little bit beforehand.

Yes because I really needed you to collaborate, mainly I needed you to collaborate in terms of controlling your emotional state so that she could have a positive experience and didn't have a countervailing influence.

But you also wanted her fairly still while you stitched her up, right?

Yeah, I can hit a moving target — in the emergency department we hit moving targets. It wasn't essential for her to be absolutely still to do the wound repair, she had to be relatively still, which she was. There were times I had the stitch in and she was sort of looking around, but that was fine. And I think, once you're in rapport, you're in the environment where you can influence the emotional state of the diad, then you can spend the rest of the time trying to focus the child's attention away from the source of the anxiety on something they're very interested in. So that sort of becomes the primary thing they're focused on.

Seems So Simple, How Does It Work?

It's almost as if the consciousness has two components. You can imagine it as the central component and the peripheral component. The peripheral is like your hard drive. So in your peripheral at the moment is perhaps the sound of the fan in the room, or the sensation

of your pen against your fingers, the ambient room temperatures. In the central would be the sound of my voice, certain body sensations that you have. Now, my job is to move all the sensations of that laceration from the central compartment to the periphery. So for Julia, what I'm doing there may be no different from the sensation she has in her left great toe. She has it, but she's not paying much attention to it. It has no emotional valence for her.

Once I'm able to successfully move or shift her awareness, then what's in the central compartment is an empty file, which I can fill, in this case, with coloring and the developmental tasks she's trying to do, etc. So that her experience at the end is that she doesn't remember what happened here because for her it was no different than the sensation in her left great toe. What she does remember is what she was focused on."

You put a big needle in her head and gave her 5, 6 stitches. She didn't feel that?
That's another piece. That piece is also technique. There are the very small gauge needles, there's a way of injecting Novocaine so it doesn't hurt. There are actually practical techniques you can do to minimize the pain of injecting, the pain of the needle.

But you're saying that if you hadn't done this psychological prep work —
That's right, she would have been very focused on this, and it would have heightened those sensations. She would have been anticipating feeling something.

Studying The Video
When I was a fellow…still in training, I was noticing that I was able to do things with children, to get children to cooperate, to have children have a painless, non-traumatic experience on a more consistent basis than some of the more senior faculty. And I didn't think this was something more personal to me. There were clearly some skills that I brought to bear that I wanted to be able to identify, articulate, and teach.

So, at that time we didn't have the stringent informed consent where we had to get permission for every picture. So I took a video camera and I put it in the procedure room. And I just let it roll while I was doing procedures…

And I would go home at night, and I would watch it and I would try to understand what I was doing. From that I was able to develop this whole philosophical framework that I talked to you about originally, about preparing the patient, and the techniques. That all came from watching what I was doing intuitively.

I teach this all over the world, the non-pharmacological management of acute pain and anxiety along with pharmacologic.

Do you carry this technique over to your own children?
I've actually sewn up my youngest, and he didn't pay any attention to what I was doing.

So you've psychologically primed your kids to never pay attention to you?
Exactly, now they're teenagers and they never pay attention to me.

The End Of The Story
Julia is fine now, and her wound is hardly visible. A couple of weeks ago, we received the bill from Children's: a $100 co-pay. Best money we ever spent.