

## **Clay Steffee - Designing Exercise Machines for Arthur Jones, Nautilus, MedX, LifeFitness, and Exerbotics - Part 2**

Lawrence: Lawrence Neal here. Welcome back to [High Intensity Business](#), the podcast where we discuss high intensity strength training and provide you with the tools, tactics, and strategies to build your high intensity strength training business.

If you prefer to read, you can download the PDF transcript for this episode over on the blog post at [highintensitybusiness.com](http://highintensitybusiness.com). The episode number is 364. This is Part 2 to Designing Exercise Machines for Arthur Jones, Nautilus, LifeFitness, and Exerbotics with [Clay Steffee](#).

Clay was born in Kissimmee, Florida in 1947. He has a degree in Mathematics from the University of South Florida. Clay started working with [Arthur Jones](#) and designing machines at [Nautilus](#) around 1980. He then went on to help Arthur at [MedX](#) in 1987, and since then Clay has worked for [LifeFitness](#) and more recently [Exerbotics](#), and now [Imagine Strength](#).

Clay, welcome back to the podcast. Great to speak to you again.

Clay: Hello! How is everybody doing?

Lawrence: Everybody is just fine. It's great to connect again and get to talk to you. When we last spoke, we did a bit of a career timeline. That was the main focus of the podcast. Obviously, we had a few audio issues and distractions so we

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decided to cut that one a little bit short and do a part 2 and finish what we started. Kind of where we got to with that podcast is we were talking about the machines you helped design at [MedX](#) which was really interesting. I just wonder if we could carry on from there. Would you be able to just describe and talk to use some of the machines you designed for [MedX](#) or helped design?

Clay: Well, when we started we had basically 4 people and I was the only designer. Kathleen, my wife, had to love purchasing. She is a senior corporate accountant. We had another person that started at the same time that came over from [Nautilus](#). Well, there's actually a couple of them that came over from [Nautilus](#) and helped with the design, help with the factory. Starting out we had [Arthur](#) purchase a horse farm in Ocala, Florida. The horse farm had a horse bus building that kept the horse bus stored in. It was 60ft.x60ft, 2-storeys high. The bottom had a 15-foot wide section and a 45-foot wide section. We put our design and office into the 15-foot wide section and a prototype shop in the 45x60ft section. It also had a second floor. The second floor was divided into three equal 20x60 units. The center unit was finished as an apartment and [Arthur](#) had a deputy sheriff who was living there. He had let the deputy sheriff live there for free and it gave him some extra security for his property. [Kathleen](#) and I moved into the section of the apartment that was directly above the office.

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We started [MedX](#) with the idea that we were going to farm out the manufacturing. We contacted some outfits. One outfit in Chicago manufactured a number of that while others manufactured the filters. I don't remember what the name of the company was now. We designed the first lumbar machine. Set that up to Chicago to have them build it. They built it together and sent it down to us. But that didn't work very well so we got to check in and the other quality of manufacturing was just not there. So [Arthur](#) said, "Well, I guess we will have to manufacture them ourselves."

We added all these little portable buildings behind. The building that we were in was just big enough for keeping the machines. The prototype shop became a combination prototype/production shop. The first lumbar machines that went to customers were built in that prototype shop.

Lawrence: Did you build those? Were you actually responsible for designing and manufacturing and building them as well?

Clay: Well, mostly I did design. I did participate in prototyping and building depending on what I was doing at that time. If I had the time I would go up in the shop and drill holes, or whatever, run the saw. I'm not a machinist but I can do a certain amount of limited stuff on a mill, or lathe, or band saw, or whatever, and a little bit of welding. But I tried to leave the actual manufacturing to the people who were really formally trained for that. We

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had several really good people who put stuff together, manufacture parts, and everything to a very high degree. Anyway, the first customers and machines that went out were built in that facility. He had a hay barn that was adjacent to this horse barn. Horse bus barn I guess. We didn't have a concrete floor, basically a horse barn, and we went out and put a concrete floor in it and walls. It is basically an open structure with a roof, put the walls up, and floor, and added to our production capacity. And later on we added some more buildings behind that that became more of a production facility. Bigger and better production facility. And we kept adding buildings. I guess the last building that we added was 225ft long by 150ft wide.

Somewhere along the line after, I guess I've been there about 11 years, my wife [Kathleen](#) wanted to go back to school. I said, "Okay, fine. We've got pretty much covered." She went back to University of Florida and got her accounting degree. While she was there, [Arthur](#) sold [MedX](#). We had a new management of [MedX](#) and I was liasee employee. The guy that took over running [MedX](#) was a guy named Larry Evans. He was a really good guy. I think the first year he was there he was actually doing quite well sort of profit whatever. He hired an accountant whose name was [unclear] That was my wife. She remembered it.

Lawrence: She is there to help.

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Clay: Well, he was there for a little while and he had a Vietnamese girlfriend I guess that he had to spend a lot of money on to keep her happy. So he started embezzling money from [MedX](#). Larry Evans of that after about 4 or 5 months and was preparing to go to the new owners. But [unclear] beat him to it. He went to the new owners and accused Larry of taking money out of the company so they fired Larry. [unclear] he was on the computer side developing the computer programs for running the medical machines. He was a little bit crooked also and he lasted about 3 or 4 years and they finally escorted him off the premises. The sheriff came and escorted him off. At that time I was long gone because that guy, this is about the same time that [LifeFitness](#) purchased [Hammer Strength](#) and [Gary Jones](#), Arthur's son. He was the one who started [Hammer Strength](#). [Gary](#) is very smart and very creative and very clever and made [Hammer Strength](#) extremely successful. It reached a point where he felt like needed professional management or something which turned out it probably was a mistake. But [LifeFitness](#), [Gary](#) engineered the sale of [Hammer](#) to [LifeFitness](#). When he sold [Hammer](#) it had a number of sales guys who had regions. And one the regions was the Western region or Northwest. I'm not sure which was ran by a guy named Tom [unclear] And [LifeFitness](#) purchased [Hammer](#) and immediately did away with all the contracts with all the franchise owners. Tom [unclear] He came and contacted [MedX](#) and [MedX](#) was looking for salespeople so they got together and he said, "Look, I can be a salesman for [MedX](#) in return for I

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want us to come out with a line of plate loaded equipment to compete with [Hammer](#).”

Well, I found about that. And maybe of the laid back, quiet guy that I am, I started raising hell. I said, “You’ve got to be absolutely insane to try to compete with [Hammer Strength](#). There’s no freaking way we are going to be able to do that.” The next thing that happened was they moved me outside the company and made me an outside subcontractor. I’ve been there at that point for 10-11 years and wasn’t too happy with that, but I said, “Okay.” [Kathleen](#) was still going to school. We had a house 6-8 miles away from the plant. I set my computer up in the new house and work from home.

[Gary](#) found out about my situation so he started calling me up asking me to come work for him. First it was once a month he would give me a call, then it was once every two weeks, then it was every week, then it was every night, and then it was twice a day.

Lawrence: You went through this on the [first podcast](#), Clay.

Clay: Oh I did?

Lawrence: Yeah, it’s okay. You went to work with him at [LifeFitness](#) like 11 years after that. And then you came back to [MedX](#) after that and it was on different

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ownership. I'd like to fast forward if that's okay because we covered some of this on the [last podcast](#).

Clay: Sure.

Lawrence: You came back to [MedX](#). The question I had for you actually and we can get into machines in a bit, specific machines. The last time we spoke you mentioned how [MedX](#) had a huge problem because machines weren't profitable. They weren't covering their own overhead. And then when you went to [Arthur](#). Forgive me, this might be the first time you're at [MedX](#). This might be the first time. I believe that you weren't charging enough money for the machines and it didn't make sense to you. That's why the business struggled. Now, is that when you came back to [MedX](#)? Was that the reason the business failed? I'm just curious why it failed when you came back. What were the reasons?

Clay: I'm sorry. I didn't understand. You said why did the company do what?

Lawrence: Because you came back to [MedX](#), right, after [LifeFitness](#)?

Clay: Yes.

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Lawrence: And then what happened then? What happened to the business then in terms of performance and that kind of thing?

Clay: Well, they had changed hands several times. When I went back they had new owners who said to sell it again. I was unemployed so I was looking around for a job. They said, "Well, would you like to come back and work for us as factory manager?" I said, "Well, yeah, I can do that." And which we did. We moved. We were still living in Kentucky. I didn't feel real secure about the situation so we did not sell our house in Kentucky. We moved back down to Florida. Larry Evans had a house on the north end of the runway that [Arthur](#) built. He was living in Orlando at that time. What I had told them was I'll be happy to come back to [MedX](#) if you bring Larry Evans back at the same time. Because in my opinion he is the only guy that I know that can actually make the thing profitable. And they did. They hired him back also because they were basically going by the tomb I guess.

Larry and I came back at the same time. He continued to live in Orlando. He was gracious enough to allow [Kathleen](#) and myself to move into his house on the north end of the runway so it was very convenient for me. Of course I was "factory manager" so I went in and started trying to implement a lot of the stuff that I had learned at [Hammer](#) as far as Hammer ran a factory. At the same time going back and checking all the drawings and the designs that were being currently manufactured. They really haven't designed

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anything new since I left the first time. Anyway, I was there for about a year. I think Larry was there for about 6 months or something. He kind of threw up his hands and said, "This isn't working."

Lawrence: Why wasn't it working? What happened?

Clay: Well, I don't know what was going on at his end. He never really went into details with me. I think he was banging heads with the owners. They wanted him to do x and he wanted to do y and basically ran out of patience. And as I say I lasted about another 4 or 5 months after he did. And then they quit meeting payroll. They just stopped paying everybody. The people who were in the factory, a lot of them had been there. There were folks that I had originally hired almost 20 years previously. They had been there for 20 years. A lot of the old timers there said, "Well, we'll be willing to work without a paycheck for a limited amount of time." A month went by and they weren't making payroll. I wasn't getting paid either. I got a call from a guy that I had worked with at [LifeFitness](#) who had become the president of [Exerbotics](#). He said, "Would you please come to work for me." I said, "Okay." So [Kathleen](#) and I moved back to Kentucky and I flew out where the [Exerbotics](#) company was.

Lawrence: Clay, before we move on. I want to learn about [Exerbotics](#). Sorry to interrupt you. But I'm really interested in [MedX](#) and why the business has never really

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seemed to have recovered it seems. The way I understand it and my understanding is probably not completely accurate is that [Nautilus](#) was really successful. [Arthur](#) and the team made a lot of money.

And [MedX](#), the machines are incredible and coveted around the world I suppose mostly by a niched industry strength training studios for the most part. And yet the business has always struggled and I believe might be, I don't know where it's at now, but the way I understand it is it's just not in a very healthy position. And yet these are unbelievable machines. I mean, we have them in our studio. We love them. Whenever we are buying machines we are always looking to see if we can get a [MedX](#) version of a particular movement. In fact, we literally just placed an order for 5 machines out of Germany. Can you just explain to me why this business has really struggled since the time you were last there and since they were struggling to meet payroll like why. Do you know?

Clay: Well, [Arthur](#) started out. He basically had a [unclear] education. He was not a businessman. [Arthur](#) was a showman. He was almost like a carnival barker. He had a lot of life experience.

Lawrence: But [MedX](#) had changed hands a bunch of times since [Arthur](#) and no one could make it work it seems.

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Clay: Correct. Well, I was always on the engineering end. I was not on the business end. But just before I left [MedX](#) the first time before [Arthur](#) sold the company, we started out building medical machines and that's all we did. I thought we were doing okay. I thought that the medical machines were profitable. I didn't know for sure because I didn't have visibility of what was going out, what it was costing.

Lawrence: Sorry, Clay. Let me just jog your memories. In [Part 1](#), you said how you investigated all the costs. I'm guessing that's where you are going with this, right? You looked into what is the cost, what is the overhead for each machine? You then presented that to [Arthur](#). I think you said [Arthur](#) presented that to [Jim Flanagan](#) or some other salespeople and they said, "Well, we can't increase the prices because they won't sell." And that's where we got to, right?

Clay: Well, my point was who do you listen to? Do you listen to the guy that's building the machines for you or do you listen to the people who are selling the machines and are afraid that if you raise the price you're going to hurt their income because they won't be able to sell as many machines? That was where [Arthur](#) made a big mistake. He listened to [Jim Flanagan](#). Flanagan told him, "No, we can't raise prices. We won't be able to sell as many machines." It is like okay they are going to continue to send machines out the door with \$100 bills plastered all over them because that is

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essentially what you're doing. They are costing you more to manufacture than what you're getting from them when you sell them and so we need them to raise the price. Now, if you couldn't sell them at an increased price where they actually made a profit then maybe you shouldn't be in business in the first place.

Lawrence: I would agree with that. Is that the problem? Is that what happened despite the change in management and potentially the change in the strategy? No one overcame that and that's how it fell apart? Or are you privy to other reasons for why [MedX](#) never seems to recover?

Clay: Well, yes. I believe that nobody has ever been able to build the machines at a price point where you could actually make some income by selling them at a price that people are willing to afford. Now, if we had doubled the price on the machines at that particular point in time then maybe we would have started to show a real profit.

Lawrence: Is that how much you needed to increase the prices by? You needed to double them? Was that necessary?

Clay: I don't really know because as I say I did not have visibility of the cost.

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Lawrence: I'm not trying to turn anyone into a villain here or make this political. I'm just very curious as to why this business that develops such great machines never seems to have become successful.

Clay: Part of it is, as I say, they don't charge enough for the machines. Of course, [Arthur](#) was not the least shy about spending money. He went through a lot of airplanes while I was at [MedX](#). He had three 707 at one point while I was there.

Lawrence: Did you factor that into the expenses for each machine? I'm kidding.

Clay: I did not because I never had visibility of what he paid for those planes.

Lawrence: Yeah, of course. Thank you for that and sorry for cutting you off. Before we get into stuff about [Exerbotics](#) can you talk to us about some of the machines that you helped design at [MedX](#)? Some of your favorites maybe. I'd love to hear your favorites. Maybe those that are a little bit underrated in your opinion.

Clay: Well, we did a bunch of machines. I couldn't put a number on it, 30 machines, 40 machines, or something. I know we did the, as far as the medical machines, probably my all-time favorite was the lumbar machine because I think it really helped folks who were in rehab. It did wonders for their backs.

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I was involved a fair amount in the testing of the machines where we were gathering data to see what response people got from being on the machine. I got exposed to folks that I really feel sorry for because their backs were in such terrible condition. But almost without exception everybody that we put through a rehab program at the farm in Ocala all came out much better.

Lawrence: Was this the medical version or the standard [MedX](#) lumbar? Because we have the non-medical which I love. But I know the medical is even way better.

Clay: Well, the medical. It was the medical machine, yes.

Lawrence: Yup. Okay.

Clay: The medical machine has some functionality that the exercise version does not. Primarily the adjustable counterweights for torso mass. If you are able to adjust for the torso mass, you can literally put somebody in the machine with zero resistance and just have them go through the motion just to free up their back so you can start them with practically zero resistance. We can do that anyway. We had compound weight stacks on them with the lumbar. Well, I don't remember. I think it had a 4-inch stroke so you are lifting... And [Arthur's](#) reasoning for doing that was to eliminate momentum. If you can only lift the weight 4 inches you can't build up much speed. He felt momentum could be, when we were training a physically challenged subject

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that momentum could cause harm if we got to move them pretty fast. That's the tendency with people who are unsupervised as they start to move faster and faster and start throwing the weight. They do that because they can use more weight and people get caught up and try to demonstrate strength instead of actually training slow. That's one of the things we have to deal with.

Lawrence: Yeah, that's a huge point. It is something we talked about when we are talking to clients about the sophistication of the [MedX](#). We talked about weight travel and the effect that has on momentum. Any other machines that come to mind that you really like or that you feel are underappreciated which come to mind for you?

Clay: Not really. Each machine was designed for a specific purpose. If you are going to rehab somebody then obviously you want to use one of the rehab machines. But for the general population just to increase strength you have to use quite a number of machines to exercise all the muscles. I don't really have any favorites. It's been a long time since I've actually done a [MedX](#) workout.

Lawrence: I'm really testing your memory.

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Clay: I mean, when I first moved from Kentucky back to Florida this last time after I had recovered from a broken neck, I went back to [Joe Cirulli's Gainesville Health and Fitness](#). He has a full line of [MedX](#) stuff. I was doing a workout with, I don't remember, 12 and 14 [MedX](#) machines. I think that helped me a lot on my way to getting back to some semblance of where I was before. At that time it was very educational for me and quite humorous at times. When I get on a machine and perform an exercise in what I knew to be the correct fashion, a little later she would come up to me and say, "You don't do it like that."

Lawrence: No way.

Clay: I would say, "Well, how should I be doing it?" And she proceeded to tell me.

Lawrence: She didn't know who had a role in designing the machines. That's hilarious. What were you doing? Can you remember what machine that was and how you were performing? I'd love to know the details of that like how you were doing it.

Clay: It was the exercise abdominal machine.

Lawrence: Got it.

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Clay: The exercise abdominal is a difficult machine to do correctly. Of course it is related to the back. The bones that you are articulating, you are articulating the spine. You have essentially a multitude of axes of rotation so the movement is a little bit complex. I got a patent for designing a work arm, an [Exerbotics](#) work arm. The [Exerbotics back abdominal machine](#) has a quite simple solution for that by making the pad rotate indecently from the work arm so that it tracks the body as opposed to forcing the body into a certain path.

If I go back and look at the lumbar machine from day one. That was one of the problems that we had in designing the thing was, okay, where do we put the axis of rotation for that movement? We ended up putting the axis behind the [unclear] pad behind your back. But I was never really satisfied with that. [unclear] that really tracked the body movement that well. I thought it took me, I came up with the idea for the [Exerbotics](#) machine after I had gone to work for [Exerbotics](#). I've been thinking about it for 30 years and finally came up with a simple, effective solution for that movement. And we did the [Exerbotics](#) back machine, back ab. And everybody says, "Wow! That's a great movement." Everybody who has a back moves their back a little bit differently than everybody else. But the machine accommodates that because the axis is actually floating. The axis moves as you move. It's a very, very effective machine.

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I've got a guy that I worked with. I went to work for... What was the name of that company? I went to work down in Louisiana and met a guy named [unclear] He had actually worked at [LifeFitness](#) for a while. The same time I was there. But I didn't get to know him while I was there. And he was in Chicago while I was in Kentucky. Anyway, he had come up with a solution for leg extension where some people weren't experiencing discomfort in their knees when they were doing the leg extension movement. He had taken two spur gears and put them in the machine in the work arm with their axis parallel to the axis of rotation of the knee, so that as the work arm was rotating it rolled over on this spur gear which was in a sense a moving axis of rotation. He built a prototype and put it into a facility down in, not New Orleans, [unclear] was getting good feedback from that. He is a little bit of an odd duck. He was an engineer. He was a Navy SEAL and got into the military. I don't know all the details of his education and everything. But he became an engineer and went to work for Body Masters. That was the name of the company. Body Masters was the company in Louisiana that built exercise equipment. They had shut down and the company bought the facility and the company made oil well equipment. They retained a number of engineers who worked at Body Masters originally including him and they talked, this company that had purchased Body Masters. They talked into trying to resurrect Body Masters. Anyway, I met him there and maintained contact with him. He has a clever little thing for moving axis we have incorporated into the [Imagine Strength](#) leg extension and leg curl. And we

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may have incorporated it on some other stuff. Anyway, we have around 20 minutes left before my wife has a meeting coming up.

Lawrence: Got it. Yeah, I have a couple more questions. I'm very aware of time so don't worry. I just love to hear your view on exercise machines today. A lot of people in our space, people that have great respect for [Nautilus](#) and [MedX](#) machines and what makes them great, or machines you're producing at [Imagine Strength](#). They compare those to a lot of the other machines on the market today and they just don't seem to have any comparison. It seems to me that a lot of the lessons learned and a lot of the design that worked so well with some of these machines doesn't seem to have been carried through to a lot of these other more modern machines. I'm just curious why that is. And maybe you can educate us on what's different about the machines you've worked on and the lot of the 'mainstream exercise machines' particularly in strength training.

Clay: Well, [Arthur](#) started [Nautilus](#). It wasn't too long before he started getting copycats, competition, whatever. He had a competitor that came out. I don't even remember the name of it now. But he ended up suing them because they were using a cam in their machine and this and that and the other. The lawsuit went on for about 5 years and they finally got tired of filling with lawsuits. They just bought the company. They shut it down. Took all the equipment back to [Nautilus](#) in Virginia or what have you. They had a cam,

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the #25 cam. You'd look at a leg extension, it had a #25 cam. You'd look at an overhead press, it had a #25 cam. Whatever machine they have. The #25 implied they had at least #25 different cams. But they used the same cam on every machine so they really knew what they were doing. I don't know how big the competitor was. They were just somebody that was trying to copy [Nautilus](#) and feed off from [Nautilus'](#) success.

The thing about [Arthur](#) was he was not driven by. He wanted to make a profit. Sure. But he was driven much more by the engineering side. He wanted the perfect tool as perfect as he could make it. That was what he always strived for. I thought that was a good philosophy and so I adapted that myself. I said, hey, let's make a machine so that it comes as close to doing what we say it will do as possible. That's the biggest thing because everybody else was, "Oh, there's a bicep machine. Hook a cable to a pulley and drive the weight stack. Off to go. Let's figure out the cheapest way to do it." You get what you pay for.

Lawrence: Some of these machines that do just that and don't take it seriously are expensive. Are you saying that the problem that still exists today is the same problem?

Clay: You've got to look at who your customer is. Your customers are, for a lot of these companies, their customer is the exercise facility and who got these

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chains of big facilities that they have hundreds of machines. Their approach is when a customer comes in the door and says, “You guys have [Hammer](#)?” “Oh yeah. We got [Hammer](#).” “Well, do you have [LifeFitness](#)?” “Oh yeah, we got [LifeFitness](#).” Machines of every brand. And then people can come in and...

[Gary](#) had an interesting analogy on this. The reason that [Hammer](#) was successful, one of the reasons, is they started out selling the machines to the high schools. Well, high schools couldn’t afford the selectorized machines with weight stacks. But with the [Hammer](#) machine you just throw weight plates on the thing and use that for resistance. And they were incredibly smooth because they didn’t have chains, or a strap, or pulleys, or anything that was creating friction. They started out at the high schools and had great success in the high schools. The high schools that purchased [Hammer Strength](#) were able to have superior athletic teams. So what happens? The high school kids graduate and they go to college. Once they go into college sports the first thing they do is ask their coaches, “Where are the [Hammer](#) machines?” Then the colleges and universities start buying [Hammer](#). And those guys go through four years of college or whatever then they get recruited by the pros. First thing they do when they go to the pro team is, “Where is the [Hammer](#) equipment?” That’s the way he grew the business.

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Lawrence: Branding.

Clay: And was very, very successful. He had a product that was very inexpensive relative to selectorized equipment and worked very well. [Gary](#) learned a lot from his father about muscle function and what kind of resistance profile you needed, so on and so forth, so his machines were productive. And consequently he had a low cost machine that was very productive, and he was very successful with it. That's why [LifeFitness](#) was attracted to buying [Hammer Strength](#).

I had an interesting conversation. There's another piece of the puzzle. That [LifeFitness](#) had a product manager, actually he is a senior vice president now or something, they bring [Highsmith](#). He was in charge of all the strength stuff. We had a lot of discussion one day about strength, and strength curves, and this, cams and whatnot. He said, "I don't care about strength curves. All I care about is does it feel good." Well, that's a big fact. Because if you put two machines side by side. One with what I would call a correct resistance profile and one without a correct resistance profile, they can feel quite a bit different.

One thing I ran into, I ran into it specifically, the leg curl machine. The leg curl machine that Nautilus built when I was in Lake Helen, Florida. I Ran a prototype where we had a little gym set up, we had a leg curl and I got on

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that thing. I got up to where I was using about 95lbs. And for about 3 months I went and I could not make any progress. I couldn't get any stronger. I kept hitting the sticking point halfway through the movement. One day I said, well, how about I design a cam that falls off before I hit that sticking point and see what happens. Because my theory was that if a resistance profile was correct that you're going to exercise to failure. The point that you fail should be random throughout the range of motion. And so I designed a cam that had like 3 to 1 fall off. It was hard at the start and fell off as you contracted your muscle. And as the muscle contracts you build up. You're compressing the muscle more and more so more and more of your strength goes into just compressing the muscle. So obviously you're going to have less strength left over to actually lift the weight. So I put this cam on there and within about a month I had gone from maxing out at 95lbs of resistance, I had gone up to about 180lbs. I have doubled my strength in one month by changing the cam. I said, well, maybe I'm into something.

I talked about this to [Arthur](#) and we changed the cam on the leg curl. We did a leg extension cam. And he said, "Okay, take this cam and go up to Virginia. Have them put this cam on the leg extension machines." I said, "Okay." At that time the engineer in charge we put the cam that [Arthur](#) and I had designed on the leg extension machine and he got on the machine and did the exercise. Right at the very end it falls off quite a bit and it feels like... The [Hammer](#) machine would like this also. It feels like you are about to go over

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backwards or the work arm is going to come up and hit you in the face. He said, well, that isn't right. He said that. I didn't say that. So he put the cam out and went over to the band saw and changed the profile on that cam with a band saw. That feels much better. Well, I told [Arthur](#) about that and the guy who was running the prototype at [Nautilus](#) got fired. And that's where I got promoted to head of engineering I guess. I felt bad about that. But I also felt [Arthur](#) needed to know what people were doing. They were changing stuff behind his back without telling him based on their own personal opinion. I figured, I said, I don't think that's right. Anyway, just to give you some examples of things that go on and that happened.

Lawrence: Yeah, it's super interesting. Clay, I just want to be respectful of your time and obviously there's just a couple of things I want to touch on. Before we wrap up can you just talk about the project you're involved in now at [Imagine Strength](#)? And we'll put all the links in the blog post for this. Just describe to people what you are doing there that's all very exciting and how people can get in touch.

Clay: Well, what I'm doing is I'm kind of, sort of, basically taking [MedX](#) machines and taking what I have learned over the years and applying what I have learned and know to a [MedX](#) machine, and improving it, and calling it an [Imagine](#) machine. One of the things that I've done is... Old [MedX](#) machines have a 12-inch stroke which means the weights move in a distance of 12

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inches if you do the full range of motion. Well, his idea was to reduce momentum. Well, that's okay. I agree with that. But I just felt that he took it maybe a little bit too far. To give you an example, if you do 100lbs then you lift a foot, that's a 100 ft lbs of work. I felt that you can still get pretty low momentum but you can save some steel by increasing the stroke a little bit. So in the [Imagine](#) machines we incorporated an 18-inch stroke (a foot and a half). If you lift 100lbs a foot and half, that's 150ftlbs. You get more resistance using the same amount of weight and more available resistance. If you are going to exercise correctly which means doing it in a controlled, not too fast fashion, momentum is not a factor. That's my improvement.

Lawrence: That's fascinating.

Clay: My wife is holding up three fingers at me.

Lawrence: Well, look, maybe if you don't mind I can jump in here. What's worth saying is the website is [imaginestrength.com](http://imaginestrength.com). Relatively new business so people need to be patient. If they contact you or [Jeff Turner](#) with their interest. Obviously, I don't want this to be like a kiss of death podcast where tons of people from our niche get in touch. But I think you can go to the website and you can subscribe with your email address and just keep tabs of what's happening there. I think it is fair to say that if lots of businesses try to write their order it would be a bit of a problem right now, right?

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Clay: Yes.

Lawrence: Yup. Okay.

Clay: I mean, if everyone who contacts me I'm perfectly happy to talk to folks. But anything that has to do with ordering a machine, I'll turn that over to Jeff. Do you want any of my contact information?

Lawrence: Well, obviously you've got contact details. I have your contact details, Clay, on the actual blog post for the podcast and I'll have all the details. So people can go to [imaginestrength.com](http://imaginestrength.com) and they can see the telephone number there and [Jeff's email address](#) if they want to learn more as well. Very exciting. I'm really excited about what you guys are doing. I can't wait to see how the business develops. Clay for everyone, are there any parting thoughts or are we good to wrap up?

Clay: Well, do you want to do this again in the future?

Lawrence: Absolutely, Clay.

Clay: Well, talk to you next time.



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Lawrence: I'll email you immediately after this. For everyone listening, to find the blog post for this episode and download the transcript PDF to read, please go to [highintensitybusiness.com](http://highintensitybusiness.com) and search for episode 364. Until next time. Thank you very much for listening.