

Dave:

You're listening to Bulletproof Radio with David Asprey. Today's cool fact of the day is that your body contains more than 600 muscles and each muscle is made of muscle fibers and what they actually do is they have contractibility, which means the muscle is capable of shortening or lengthening as needed and it's pretty much all the movement in your body happens because of this.

And the motor cortex on the right side of your brain controls muscle on the left and vice versa, you have this crossover in your brain. And so it all comes down to spinal cord and out through the peripheral nervous systems in your muscles, but muscles can't ever push, they can only pull so when you're pushing a door open, your muscles are actually pulling your elbow and shoulder against the door.

Each muscle type in your muscular system has a different purpose. You're able to walk because of skeletal muscles. You can digest because of smooth muscles that move things through your digestive tract, and your heart beats because of cardiac muscles. So we have all these amazing specialized types of cells and we're going to talk more about muscle and the muscle in your mind which is actually a muscle as well in today's interview.

Before we get going on today's interview, I would love to ask for your help. I've made the decision to put a lot of bulletproof products up on Amazon for you so if you'd like to get bulletproof products on Amazon, I'd be grateful if you would just leave a review that says why you buy them, why you like them, what they've done for you in your life because it turns out when people see reviews on Amazon especially real reviews, I've never done any of that fake kind of stuff. It'd be great just for people to hear about it.

So take a second if this show is worth your time and go to Amazon and say hey, bulletproof stuff rocks because well, I believe it does. That's why I make it and thank you for trying it. Also just want to do a quick shout out to greatist.com. I've known Derek, the guy who runs Greatist for quite a while, and he's very rigorous on quantitatively measuring what people are doing online.

They created an annual list of 100 most influential people in health and fitness, and I was amazed to find that based on their analysis, I hit number 16 on the list and there were more than a dozen other people on the list who've been on bulletproof radio. So when I looked at reaching out to people who are at the top of their field, when I find the guest on the show.

Our people at the top of their field. That made me feel good too, so thanks Derek. Thanks to the team at Greatist for doing all the quantitative analysis you do on that list. Grateful for being number 16. The highly caffeinated high fat exec which is a great description. Today's guest is none other than Frank Zane. Frank is a American former professional body builder. Author of more than 15 books on fitness, nutrition, body building. But calling him a body builder doesn't really do him justice.

Because he's a three time Mr. Olympia and his physique is considered to be one of the greatest in the history of body building due to his incredible focused on symmetry and

proportion and he was called the king of aesthetics in the body building world. Today he's 75, about to turn 76, and he offers a variety of personal coaching and training programs and training seminars and posing clinics.

And I wanted to have him on the show because he's one of the biggest names in the field and some of the first bio-hackers out there or people said I want control of my physiology, I want control of how I look at a level beyond what anyone's ever done before, so he started doing this back when I weighed 300 pounds and was hacking computers, and even probably before that, and he's just achieved incredible results over his lifetime, and is still going strong. So it's a real honor to have you on the show, Frank. Thanks for being here.

Frank: Thank you, Dave. It's my pleasure. I'm looking forward to this.

Dave: There's so much I want to talk about but one of the most obvious things is that you're a body builder, and so many people listening to the show today. Some of them, in fact most to them want to look good. They'd like to have some degree of physique but maybe not the level of mass and all that you had. So in your mind, having been to the extreme of body building. What does fitness look like for everyone including those of us who aren't body builders?

Frank: Well, I think there are a lot of myths out there about well what you might look like if you workout with weights and most of them aren't true. It's very hard to get a lot of muscle. It was for me. I think most people. They don't really have to do too much to look better as long as what we do in your workout and how you weight is better than what you've been doing.

When you do it on regular basis, you're going to make progress. And so there's really nothing to be concerned about as far as ... well, there is one thing. Don't get injured when you're doing it. Don't do stupid stuff.

Dave: Yeah.

Frank: Be careful. Learn good form. Stretch during your workout. You stretch between sets and that keeps the muscles warmed up and the joints flexible, so if you do everything with common sense, you'll be okay.

Dave: I went through a period in my life where, in fact, this is funny. I wonder if it might have even been your cover of men's fitness, but sometime in the early '90s, I weighed 300 pounds. I was fat but I was desperate and I said nothing matters more than getting in shape. So I went to the gym six days a week, an hour and a half a day. It was half weights. I did mostly machines to the point I did this for a year and a half year straight.

I could max out every machine in the gym with the exception of a couple where I was missing two plates. I went on about 1800 calorie a day diet, sometimes 15, sometimes 2000. Low fat, and I never lost a pound. I was strong but I was just covered in fat. I felt like such a failure. Just like maybe I should have eaten more lettuce or something. Did

you ever run across people like that in your career where they just wouldn't lose fat to save their lives?

Frank: Well, the way you've been trained. I'd have to know more about it. But training for strength is not going to make you smaller. What you might have done is built muscle and maybe lost some fat but overall the net result was the same, and so what you should do really is train faster with less rest between sets in your workout. Use lighter weights and higher repetitions and then concentration on more row back activity, and be on a good diet. The diet sound okay what you're doing.

Dave: I'm in good shape now, and I ended up going.

Frank: How did you do it now? How did you get down to where you're at now?

Dave: I do the bulletproof diet approach which is mostly vegetables on a plate with a large amount of high quality fat including one of the four types of MCT oil, a substantial amount of that which has been, that basically came from the body building field, but it turns out there's one type that's stronger than others, so I have ketones present all the time in my body and I eat a moderate amount of very high quality protein.

But not as much as I did when I was lifting really heavy. My muscle mass is smaller than it used to be, but I'm relatively muscular. I carry about 107 pounds of muscle today, and about 28 pounds of fat so I'm about 10 to 12% body fat. So I do this on a regular basis. But I eat butter, I eat this brain octane oil, it's called collagen protein. And just tons and tons of vegetables, and it's been sustainable without any hunger or cravings but I don't workout a lot right now.

I use technology, electrical steam and other computer driven via feedback stuff because I'm short on time. But the thing that I was bringing up about this magazine, Frank, is that on the cover it said get abs, and I was just so desperate for abs, and I've been working so hard and I had flabs even though like I said I did put on muscle but I was still covered in fat.

It said this radical thing like maybe you should eat less carbs and more protein at the time. And I said all right, I'm going to try this, and I lost like 50 pounds in three months when I added things like cottage cheese, and stuff that maybe isn't the highest quality of protein. I just wanted to say it was a body building magazine in the early '90s that led me to start going wow I can do this.

The other 50 pounds of fat took a long time to lose, but a systemic inflammation and things. So A, I want to say thanks for being a leader in the field and giving me hope when I was 23 and just a completely fat ass in order to do this. But as you've coached so many people, I'm wondering about the people men or women who just, exercising isn't getting rid of their fat. What you tend to recommend for them?

Frank: Well most of the time it's related to how they're eating. That's usually how people get heavy. It's lack of enough exercise, but I think diet is one of the major factors. I just

basically have gone what worked in my career because I experimented with a lot, especially in the early stages. When I first started going in competition. I thought that in order to diet what you had to do is do a liquid diet.

I found out that wasn't right, then I eventually got around to lowering the carbohydrate intake and eating just enough carbs for meeting energy purposes and having your habits for the protein you're eating and moderate amount of fat, not zero fat, but not real high either. It was that over time that worked for me, and I still sort of eat that way too. The diet was one gram of protein per pound of ideal body weight.

Half a gram of carbs for that same amount. So let's say you weighed 180 pounds, you'd be getting 180 grams of protein a day. You'd be getting 90 grams of carbs a day, and then you do that, and then the fat intake is moderate. It's about 25% of your total caloric intake. But you do that for three days in a row, we have 180 grams of protein, 90 of carbs, three days in a row, then on the fourth day you equalize protein and carbs to restore glycogen stores, and also so you can continue training, have some energy and get a good pump.

Because I found in other people, everybody has different kind of experience with this diet. When you go over your [inaudible 00:10:42] carbs over a period of time. You basically start losing muscle mass plus all kinds of unpleasant things happen because you're in ketosis all the time. So I found that by bringing your body into ketosis but then pulling it out. Staying on the edge of ketosis was better than heavy ketosis.

Dave: Amen, brother. Thank you for saying that. I'm concerned. There's a lot of people now who are really deep in ketosis all the time, and it seems to wreck their biology over time. It did to me when I ran an experiment.

Frank: A lot of bad side effects.

Dave: Yeah, but being right on the edge or going in and out has changed my life. You're 75 and I'm looking at you right now. You've got your hair. You've got shoulders, your brain is clearly working and this is not always the case, so what you've been doing has been field tested for 40 years plus. How was aging working for you? A lot of people say body builders don't age well but you are aging well. Even your face looks good, so what's the process of aging looked like and how have you had to modify or not modify what you do over time?

Frank: Thanks for saying that, Dave. But I don't really feel that way. I think that I look terrible and so is my wife. Because I don't look like I used to. I'm starting to workout again. Basically I've been through some surgeries and injuries and taking care of those and I haven't been working out as much. But I'm starting to step it up now, and it's not like I've been in shape for 61 years. That's how long I've been doing this. It's more like I've gone in shape 61 times.

I never really go far off what I'm doing. In other words, I don't get fat in the off season. I don't bulk up although I tried that. I stay lean most of the time. But that works for me,

and I don't want to eat much. My diet is nutritionally dense that I take a lot of supplements. Freeform amino acids, especially other supplements like CoQ10, ATP and these things, I really believe they work very well because all my blood levels are good.

I don't seem to need as much sleep. I'm lighter than I was before. I'm back training hard again to get very peak for this time of the year. I think one of the things that I've done over the years is I have a cyclic method of training where I reach a peak every year. Now it used to be my best condition ever when I was competing but since then it's my best condition for the whole year relative to the rest of the year.

It's basically what I used to peak for competition which is around October, and so for me that's my peak training season. I plan everything to train gradually harder and harder and hard. Peak in October, but then from October maybe to January, February. I'm in what's called maintenance phase. But I don't train quite as much but my training is directed to weak points.

Varies on my body that I wanted to improve more, in relation to everything else, so that when I improve them and I come back to regular full pledged training in spring time I've a different look and that's always what I've been doing. The other thing is I based my entire training program on photographs. I never bothered with any of that stuff. I don't bother with numbers. People that come to see me. We don't measure them or weigh them through body fat percentages. We photograph then and we keep photographic records.

The other thing is I have more photos of people that come here for programs. I show them what they could look like just by doing special effects on their photos changing the outline and their proportions. To get an idea what could be possible for them and they use that as a visualization exercise. So I've been doing all this. This is what I've come to after all this time and what works, and I continue to do it.

Dave: There's so many nuggets in there and let's focus on supplements. You've earned the nickname the chemist because you have some just deep knowledge of amino acids and supplements. There are a variety of people out there including something it was either the Lancet or the British Medical Journal saying supplements don't work, just came out. They do this I think to support the farm industry about every three or four years. You've been doing this for a very long time. You understand the biochemistry, and you're saying freeform amino acids and mitochondrial enhancers are the two main things you do?

Frank: Yeah.

Dave: I just wrote a major book at the New York Times science list on mitochondrial function so we could go deep on that. A lot of listeners, there's a lot of physicians and just a lot of people interested in having energy throughout their body listen. What are aside from CoQ10, what are the other things you do to make your mitochondria perform better?

Frank: Well, I think it's probably everything I take. It's hard to really say this is what's doing it, because I really don't know. It's just that it's so synergistic, everything works together, and so I take as many things that I think I need. Like for one thing that I've discovered that works really well, people ask me about steroids and what's the story.

That's a short cut, especially for competitive body builders to level the playing field, but also men as they get older, there's this hormone replacement things where guys are given testosterone and maybe too many growth hormone and all that. I think that that stuff, that have side effects that aren't desirable. Your testosterone levels go too high, you get aggressive. That's not a good feeling. It's not good for business.

Basically it doesn't really enhance your youth. All that taking testosterone just brings about you looking older sooner. Your body, you can train harder and recover faster but it doesn't really enhance how long you're going to live. I've been using a combination. I just got back doing this, Fenugreek seed and 7-Keto DHEA. And by doing this, most guys in their 70s have testosterone level of 200.

I have mine tested about six months ago, and it's 567. This is totally natural without doing anything and so when I start on this stuff, it's been shown that Fenugreek seed does boost testosterone growth hormone and thyroid levels, optimize thyroid levels and then DHEA is the mother hormone and 7-keto DH is one that doesn't bring about the secondary male characteristics. Just like lower voice, thinning hair. All that stuff.

If women were to take that, they usually take 7-keto, but that's what I'm doing. It's all natural substance because I don't want to eat much and I train on a regular basis. Plus I meditate a lot.

Dave: We'll get into meditation. Do you actually fast? Do you do intermittent fasting or do you occasionally just not eat for a day or do you eat every day?

Frank: I don't fast. Also you mentioned intermittent fasting. I think that's one of our programs that we recommend people who want to start losing weight to get the ball rolling. Eating every other day. Not even fasting on those, just eating less on those days. Using amino acids, and it works very well. The next step would be that three on, one off diet we talked about.

Then the final stage of dieting is just basically to adjust your carbs and your protein and fats to a level where you feel comfortable which is usually about as much carb as protein. Maybe a little less carbs but it's all right around that balance.

Dave: What happens if people eat too few carbs?

Frank: Well, a lot of things. You can get dehydrated for one thing because carbs hold water in your body. You can get constipated because you have no fiber going through. You can get lethargic because you don't have any fuel to run on. What can happen is your body can start tapping into lean muscle mass which basically your hips and your thighs where

most of the muscle is, and pull out gluconeogenic amino acids like glutamine or alanine. Send them to your liver and strip the nitrogen off, use that for energy.

What happens is it blobs your muscle for energy. This happens with a lot of people when they get older. They don't eat enough protein or exercise with [inaudible 00:19:08] to help maintain the muscle mass. They just eat a lot of empty carbs and they shrink so that's never happened to me so I don't [inaudible 00:19:14].

Dave: Because you've had a clean diet for a long time, and I think your supplements would likely work based on my own experience with those and I didn't mention this in our pre-conversation. I've run an anti-aging research group for about 20 years now in Silicon Valley where we've had people come through and so I've had a lot of time working with people in different ages.

Just looking at what happens exactly what you said there. You just start eating more carbs and you stop moving and you stop lifting heavy things. How often for someone who just wants to look okay and maintain their health. How often do you think they need to lift heavy things?

Frank: I don't think they have to lift heavy at all. I think it's better to train with perfect form as close as you can come to in your exercise, and make lighter weights feel heavier and that's the goal. Make lighter weights feel heavier. And there's ways of doing that slowing down the negative for example. The other thing is in my gym, I have a lot of machines with weight stacks. We wrap the weight stack with rubber cable so that as the weight stack was up it stretches the cable, and it creates more time under tension for the muscle.

You don't relax between reps. A lot of times when you're working on with weights. Let's say if you're doing overhead press, and you lock out. That's a rest for your muscle because you transfer to the joint and so what we're doing is, and there's certain exercises like for example the curl. When you're curling all the way up. You lose tension in the upper two-thirds of the motion but if you have rubber cable attached to that, you don't, you have resistance to the cable.

And so you have when you use less weights means easier on your joints and still get a good pump going to the muscle because of the cable stretching. Combination of weight resistance due to gravity and also resistance to stretching of the cable.

Dave: It's amazing how a small tweak like that, like making sure there's always tension from a cable completely changes the physiological reaction to the stimulus of lifting. I definitely use some stretchy cables on occasion and I've actually done a video series on that and I also use just like a demoing a really heavy cable but I also use sometimes the electricity so no matter where the muscle is, it's getting simulated.

Or I use a computer driven, it's driven by a wench, that could pick up a truck that always maintains a load no matter where you are because it feels like I can get three times the muscle growth by never allowing the muscle to relax versus on off, on off. And those

little things I think we have more science than we did in the '60s, and '70s, but somehow you and the tribe of body builders figured out some of these little tricks very early on without maybe a lot of literature. What was your process to figure out what worked?

Frank: Just to workout and experiment. I ended up getting master's degree in experimental psychology and that pretty well described it, it's all been experiment. I know the theory. But I don't come from theory. I don't say well I read this in a book, let's apply. I don't do that. I come from what I'm doing and then maybe find some description to fit it later. And that's how it all gets in place.

It's all through the trial and tested stuff. So by going through all of it. Making all of the mistakes. Getting injured. Now I'm an expert on injury too. [inaudible 00:22:47] injuries because I've had just about all of them and so there was nothing I could. I can treat them now that's what I do, but before that happened. I didn't know any better. I just tried stuff and basically the way it was with me is I was a school teacher for 13 years.

While I was competing with professionals, and I would go into the gym in the summer. Having time off to train now, and there's Arnold and Gabe Drake are in there training really heavy and I jump right in. [inaudible 00:23:17] train heavy and before long my neck was stiff and shoulders hurt, it was like that all the time. And then when I finally retired from teaching and did body building full time, I had more time to really focus on doing everything the way I needed to and that's when I won the three times Mr. Olympia.

Dave: What grades did you teach?

Frank: Well, I taught high school mathematics. Mainly junior high school math. Call it lower mathematics. Not calculus but just the basic stuff, and it was sort of, I guess it was fun for the kids mostly that I was Mr. Universe teaching in the school. They said, one kid came up through at the time and he says Mr. Zane, if you're Mr. Universe and all that, what are you doing here? I said everybody asked to be somewhere and right now I'm here. Because we didn't get paid anything in those days.

Dave: Teachers still don't get paid very much.

Frank: No, I mean it was, my wife was teaching for a while too and so we did all right but when I had started with the mail order business and still doing that, that's really what it all developed into. The fact that I took a lot of photos. I have photos from every stage of my development from early on up to present time. It tells the story. I always had a different look and the look kept evolving.

But it didn't evolve in the direction of getting bigger. It evolved in the direction of getting more detailed development. I realized after making the mistakes and trying different things. That's just how I was going to be able to do it is by focusing on having good proportions. Small waist, everything developed in great definition and really good presentation, put the preparation in and finally it paid off. I competed in the Olympia 10 times and I won it three times.

Dave: What did you learn from teaching these kids?

Frank: Well, I learned how to teach and the thing that I noticed though is I noticed that I had a really good lesson about once every two weeks and so I said to myself why do this the rest of the time if I could just have a great lesson every week or every couple weeks. That would be much more satisfying and that's basically I always wanted to teach in something that I was really an expert in and that got to be body building because I did it for such a long time. So it got my disciplined in the method of doing it, and I like the act of teaching. But I didn't like working in a public school, I have to admit.

Dave: It takes a certain kind of patience to work. I was a volunteer teacher with, what's it called junior achievement. I'm forgetting the name of the program now, but I went in and I taught eighth graders in East Palo Alto, which is a really rough neighborhood, once a week. Well, there's the normal Palo Alto which is where all the VCs, but you cross the freeway and there's still unpaved roads. It's an incredibly dense migrant population.

Frank: So like East LA.

Dave: Yeah. Exactly, and so I went to one of the poor schools there, and taught, and talk about this challenging. Just at a emotional and emotional level. Wow, it's really hard to get through to any kids that age, but particularly when they weren't eating very well and they might have had stress at home. I just realized wow, I was also a teacher at UC Santa Barbara, or not, sorry UC Santa Cruz. For five years was a teacher of master's degree level people.

The difference there was there's something that took an incredible amount of patience for me as a young man was really hard for me to do, but I noticed that in your teaching it's very clear and it shows that you're a teacher because you know how to convey information but you also talked about this framework called LEARN and R stands for relax in LEARN. Talk about rest and sleep and meditation. I'm wondering if you got to be extra patient or learned the need for meditation because you're a teacher at the same time you're working out or whether those are unrelated?

Frank: That's how I made it through the day.

Dave: Okay.

Frank: It was. I've meditated during my free period. I did all different forms of meditation, insight meditation, gazing, mantra, did all of that, I still do it, but it really saved me. It helped me maintain my cool. I remember one time I was doing insight meditation, Vipassana. Where you label your sensations and your thoughts as they come up. Now I'd already been doing that for a whole day, and I was sitting in the teacher's meeting just wasting time listening to the stuff.

I had to go to graduate school anyway so I left. When the teacher called me out and it just didn't fazed me at all or the principal called me. It didn't faze me at all, and I continue doing what I was doing. It just was a remarkable way to maintain my calm in

spite of adversity, but no I enjoyed teaching in the poor schools. I found that the kids are more appreciative and they respected me. Because here I was, Mr. Universe teaching math. They were like in awe sort of so that helped. That worked in my favor.

Dave: It's an incredible thing for people listening. If you ever have a chance to be a volunteer teacher. You've got to do it because it inspires the heck out of kids. It does feel good and you'll learn some things about your own patience on what pushes your buttons because kids are good at pushing your buttons. What's your meditation practice look like today?

Frank: I say mantra. I found this mantra in 1976. I started saying it because it felt good and I made a vow to say it a million times a year, and I did in those three years, 77, 78, 79. The years I won because my mind was just so focused and nothing could faze me, especially 1979. I had a house in Palm Springs that was really a gym and I just for the whole month I trained and got sun and ran at night and said my mantra all day. I was just Samadhi the whole time of the competition. I knew I was the winner.

I was able to convince myself that I was the winner and I think that's the secret of winning is to win it ahead of time. To think and talk like the winner. Not to boast but just to be sure. To be sure to yourself. I developed this concept of faith. There's really different degrees of faith. The ordinary faith is believe in things that aren't seen, that haven't happened. If for some reason you believe them and you practice this more and more and the amount of people doing, you developed a strong faith.

The other level of faith I believe is a much higher level of certainty being certain that things will happen. Not guessing it, because you're sure. And that's what I was able to do. I was able to become certain and I was able to become certain because I got proof of what that looked like by all the photos I took. I realized that everybody that was going in a competition except me does not know what they look like when they get on stage.

They find out at the contest and they either place higher or not, usually not. But I knew what I looked like because not only I see what I looked like from all angles, but I also rehearsed the pre-judging. I would go out and stand, like for example, round one was where you stood relaxed and then the judges look at how you look standing relaxed, then they'd call you up for comparisons.

What I would do is in Palm Springs at six at night, it would start, the sun was getting lower on the horizon so I would go out and stand like I was in the lineup for 15 minutes from the front, back, in both sides for a total of an hour, getting a tan. Believing that I was on stage doing this. It was things like that I knew nobody else was doing that, so it made me a little more confident.

Dave: You mentioned Samadhi. Can you describe what that state is for people who haven't heard it and your experience of it?

Frank: Well, I think definitely, it's peace, that past of understanding. You just have this incredible sense of peace and confidence by yourself and there's no explaining it. You just have it. It just descends upon you. That comes up every now and then. I was

listening to [inaudible 00:31:42] yesterday afternoon and that feeling all of a sudden came to me, just tremendously joyful and peaceful and then I said to myself I'm tremendously joyful and peaceful now and then it went away.

As soon as I tried to put understanding, I'm trying to understand it, it went away. It's not for understanding. It's for living and experiencing. I have no reason to question any of this. I'm just willing to accept it when it comes.

Dave: It's funny that when you tried to think about a feeling, the feeling goes away. I run a neuroscience institute that's focused on these states like Samadhi and things like that, more for accelerating lifetime's worth of meditation and I had to do a lot of that work myself, and that was a beautiful description. As soon as you noticed, you go, that's cool. It goes away.

But you are in that state for most of the time for several years because you're in the zone. So part of your competing maybe in the major part is you had to do the work to make your body look a certain way but you had to show up a certain way psychologically in order to win. Is that accurate?

Frank: Well, I wasn't in it all the time. And for me, preparing for competition and I did that for 23 years I competed from 1960 to 1983. I only missed two of those years because I was traveling doing exhibitions. But it was like preparing for competition is very spiritual experience for me because I meditated to keep my mind in the right place because I noticed that if I didn't say my mantra.

Whenever I believe my mind would drift to what if situations like what if so and so looked like this or what if they're judging. I've never realized. None of this had anything to do with how I looked, and so I focused on me and just thought about lifting things all the time with my mantra, and meditated [inaudible 00:33:37] all that. And it happened. It just purified my experience. I got to a level that nothing could shake me because I knew.

Dave: You're just unflappable on stage. There wasn't a voice in your head, that was like I needed to tighten my left ab a little more or?

Frank: No. I did it right. There were years when I didn't. That I was in conflict. 1982, I was just doing what everybody told me to get bigger, and I did, and I got a little bit too big, and I lost my lines, and that year I was not quite. And things didn't go right at the competition either. I ended up getting second. I could have done better if I would have just prepared with a different mind frame, but this is tricky business.

Life tends to catch up with you if you're not careful and you're not very good in your practice, and the thing is my discipline. A lot of people look at my physique and they say well, I think I can do that because he's not very big, and he's slender, and then I realized all the work I put into that to get the look that I developed, it's not about big, it was about detail, the completion that I have everything developed.

Like for example, the back. The back is, so a lot of little muscles back there with big muscles too, and to really have an outstanding back you have to really specialize and do a lot of tensing and rubber cable work and stuff like that. If you don't have that, so in body building competitions. There are the things that I realized having done competition for so long is you see guys lined up on stage they all look pretty impressive from the front but when they turn around from the back, things change.

Backs aren't as good because nobody can see their back. Not directly, and so they tend to ignore it. And so whatever you ignore is going to fall behind, you can't ignore anything.

Dave: Did you take pictures? Did you take pictures of your back and looked at those?

Frank: Everything. Sure. I didn't. My photographer did. My wife [inaudible 00:35:37] was the photographer in most of these situations and that's how you learn. The thing is nobody could see themselves. People need to think they look better than they do or worse. Even when you look at a mirror, you don't see yourself. You see yourself backwards and that's a distorted image because your gauge has to pass through your bubble of perception if you want to call it that.

It's this idea of how you look, it's your self concept. Basically you looked different than what's on the mirror, to just put it that way. You have to learn to see yourself the way other people see you. That's a meditation spiritual thing. That reminds me of [inaudible 00:36:14] concepts of self remembering. Self remember, you basically are mindful of what's going on inside, but you're also mindful of what's coming in from the outside. It's like taking photographs of yourself all the time.

Dave: When did you start meditating? What age?

Frank: As soon as I got interested in everything at age 14.

Dave: Wow.

Frank: I discovered body building. I discovered yoga and meditation. I discovered harmonica playing and archery, and I still do all of those. I'm still passionate about all of them.

Dave: Who taught you to meditate?

Frank: Books.

Dave: Books.

Frank: I bought books.

Dave: Beautiful.

Frank: I bought two books. I remember [inaudible 00:36:56]. One was about Patanjali aphorism, it was about the powers [inaudible 00:37:00]. I was always interested in it for some reason, the Buddhism. Very much interested, student of Buddhism because I like what it's saying.

Dave: Patanjali wrote a book that the yoga sutra is that described all this mental and we'll call them psychic powers that people are capable of throughout history.

Frank: Siddhi.

Dave: Siddhi exactly for everybody listening who haven't heard of it and want to Google it, and do you think those are real?

Frank: I've have hints of those things every now and then. Intuition gets stronger about things, knowing things before they happen. Second sight, seeing things, and then they happen. Not on a large scale. Another thing for me, I think is the fact that I think that there's sign of spiritual progress and basically if you're on the [inaudible 00:37:53] path. You're granted those powers to help people, not to use for personal gain.

That's my goal as I get older is to teach. Because I've already accomplished my goals for myself. It was really nothing there, but I still want to workout and basically workout with people and teach what is good for them to know, as far as I think there's a lot of un-useful, not good information out there about how you should train and I don't like it, so I want to get my brand out there as much as possible.

Dave: When body building became a thing in the '60s and the '70s, there's a really strong community that formed around it down in Santa Monica and Venice and places like that. How important was the role of community? Working out with your buddies, and that whole thing. How important was that for your motivation for who you became?

Frank: I loved it. It was everything. When I came to California in 1969. The older generation of body builders, like Joe Gold, Zabo Koszewski, Arty Zeller, our photographer, Joe Weider. They're all there and helped us. I didn't make any money doing that. That's why I was teaching. But I did it because I loved it. The older guys just, they're such great people. It's like we're able to stand on the shoulders of giants with these guys.

I don't see a lot of that anymore [inaudible 00:39:18] soon to be there, but it was really great. The early '70s especially. We didn't compete against each other in the gym. We helped each other and gave each other feedback but then toward the end of the '70s, we're competing against each other because we got to be the best to compete against. It was wonderful. I still think about those days all the time.

I still write about them. I still write about them. I finished this new book I have called Zane Body Building Manual, it's all about that. It's actually everything, it's about eight of my works condensed into one volume and it's basically a reference book, and so it's all traced, this whole story is traced about what I've been through and what's coming up now.

Dave: What do you do today to maintain that sense of community in your life?

Frank: I really don't have a lot of close touch with the people that were involved then because they're all in different places. I don't really go to events either but basically it's my program here of my Zane experience program, my private gym. Also at the Zane Gallery of Aesthetic Muscle in Laguna Beach, we own an art gallery up there that's also a workout studio and I do seminars there.

You spoke with Julie Space, who's the curator, and she's writing books now and I've been training people. And she's become quite good at it, showing the results with her own developments, so that's very satisfying with me. When I could help somebody else when their workout, and see them make progress. It's like me doing it. It's hard to explain. I get more satisfaction out of doing that now than on my own training because what I am doing is just simple stuff. It's on a regular basis but simple.

Dave: It seems like throughout your life, you've been motivated by service to others. You taught kids for 13 years, you're still teaching people now. How much of your motivation comes from that just desire to help and how much comes from somewhere else?

Frank: There's two kinds of compassion. One is absolute compassion where you're just naturally that way. I'm about naturally that way. I have what you might call relative compassion. I have to manufacture. Hey, I got to say I'm a selfish person. Body building is about the art of selfishness. I've perfected that. But basically I think that one of the reasons I do this is because it makes me feel better.

It's still all about me. I got to confess. I'm still doing it for myself. But it's also helping other people more now than it did before. Before it was an example. And now it's as practical application by working with them.

Dave: If you could go back and talk to yourself when you were 20 or early 20s anyway, and tell yourself something that you know now. What would you tell yourself?

Frank: Don't get injured and follow your own path and don't listen to other people so much. I think that you know what you should be doing. Don't use as heavy weights. Save your money. Don't spend it foolishly. One of the things about getting popular when you get all this money flowing in all all of a sudden is you think it's going to go on forever, and so you buy all kinds of stuff, and it doesn't.

I wish I was a little bit more conservative, but I was okay with that, but not as good as I could have been. It was all learning experience. What you don't really profit from directly in form of gains in your life or wealth or whatever. You could always write off as learning experience, and so I can say it's all been learning experience and there had been things that I haven't profited from but there'd been a heck of a lot of things I have.

And so it's just a bunch of things. I want to be around a long time. I want to be alive long enough so that I could get the things done that I'd like to do. One of my goals for getting older, as I get older because I'm not going to be winning physique contest anymore, but

it's to become a better musician in a number of different instruments and so every day that's part of my meditation. I play about a dozen different instruments.

Dave: Wow. That will keep your mind, yeah.

Frank: Well, it's not so much me thinking about it. It's things. I noticed this flow comes through me, and I really like that because to me it's a spiritual thing. And it seems that every time I play something, it's better than the last time I played after I get into it. And so I have a bunch of harmonicas, I tune them, and customize them, and play them chromatics, diatonics, bass harmonica.

I make bamboo flutes. I make the zen meditation flute. Side-blown flutes. Minor scales, major scales. Guitars, I play with them, guitar. Open tunings, and it keeps getting better. And then I write songs and poetry, just whatever happens, it come to me. I tried to have a pad with me most of the time as Jack [inaudible 00:44:26] said keep track of every day, the date and blaze into your morning. I've kept diaries over the years. My workouts, thoughts, ruminations, things that come to me, poetry songs, rhyme. It's fun. Sometimes fun.

Dave: Do you ever go back and read those?

Frank: Sometimes. I have them all. They get transcribed into my writings so basically I wrote some stuff years ago. I called it started out as Frank Zane secret training diaries and it was workouts from my diaries. They're all in line, everyone was a [inaudible 00:45:03]. That got published as mind, body, spirit personal training diaries and it got very popular so it wasn't available anymore so I published it again, called it the workouts, and that's available now on Kindle.

But it was basically more of a record of what I was doing rather than something applicable for everybody, because it was my best workouts done over 40 year period of time. All put in one years format, and I realized how difficult that would be for anybody to do, and so that's what motivated this book which has been very successful, 91 day wonder body, which is three months of what to do every day in form of training, diet, mental preparation, meditation, motivational techniques, and it's actually a workout book.

So it tells you exactly what to do there, and that's one of my publications. So now I have one like this for the full body and then one called 91 day wonder abs, which is for people who want to get better ab. Maybe this is one you could use. Get your abs there, because it will work, if you do it for 91 days, your abs have no choice but to stand out if you do that.

Dave: I'll check it out. I do have abs now, nowhere near what you do but I can say as a guy who was obese for until my mid-20s, that seem like just an impossible dream. I still occasionally I see myself in the mirror and go wow, I don't really recognize that body because it's radically different than the one I grew up with.

Frank: Well, your abs are expressing themselves. We all have abs in there, but how much they come out is up to us.

Dave: Yeah, they can be hidden behind a few things. Frank, how long are you going to live?

Frank: I wish I knew.

Dave: Do you have a goal?

Frank: Well, I would like to be over 100, but still be functional.

Dave: There you go. [crosstalk 00:47:02].

Frank: Be able to move around and do things, and still do the things I like to do and to contribute. I don't want to be a burden, as I get older.

Dave: Your goal is past 100. That's beautiful.

Frank: I don't see why not.

Dave: I'm working on something pretty radical. I think that it's possible to hit at least 180 and full disclosure. I want to die trying, but this whole two decades of anti-aging research and seeing people who are beyond functional when they're past 70 where their brains are sharp and they're moving around. I know it can be done, and it's a question of how to get there and I'm thinking that there's some restorative, regenerative technologies coming down the pipeline that are probably going to lend some of that.

I feel like you're at such a healthy state where you are now that that's not unreasonable goal to be highly functional and to live past 100, and I'm hoping that everyone listening just starts thinking about that just like you think about how you look in the mirror and you have this picture of yourself. If the picture of yourself when you're 85 is hunched over and with only half your brain present, that's more likely to happen whereas if you're visualizing a future where I'm going to keep doing what I love. I'm going to keep helping other people. It might be possible. In your picture of your own future, how much of that comes from your mental state and how much of that comes from your diet and exercise? Do you have a sense of that?

Frank: I don't view those as separate. I think it's all in one package. There's about one common essence. That's everything wrapped up together. I think that one of the things that I'd go out of my way to practice the older I get is energy conservation. I think that you kick the bucket when you run out of energy, instead of spending it all over the place, and dissipating at which I used to do more, I don't do any of that now.

I do the things that make me feel, give me joy, and I like doing. For example, I feel useful when I'm writing and so I tend to write a lot. I've always have some project I'm working on now. I've never written a novel before, but I'm working on a novel now. I'm taking my time, a few pages a day, and so that'll be interesting when that comes to fruition.

I have another book that hasn't been published yet, but it's already done. It's called 91 day peak physique. It's about somebody who's going into the final stages of perfecting their body. What to do the last three months to bring that about, like a physique competitor would. And so there'd be three stages. There's basically 91 day wonder body which is the mid-stage. Julie Space is doing a book now called 60 days super body which is a beginner's level of training with simple equipment and workings through. Well, you don't need much equipment at all to get the base developing and get it started.

And then it gets into book called [inaudible 00:50:12] programs toward the end, and then you're ready to get into this book right here. And then after this book is one. So basically it's something you could follow all the time, these books. Because guess what, people ask me all the time. They say well make me a routine. Well, I can do that expediently if I'm working with you in person but since I'm not why don't you try this? So basically what you look like I can recommend things.

Basically, I think it's more about educating yourself to do that because really if you know enough about yourself and how to train and what works and what doesn't, you don't need an expensive personal trainer. I'm not trying to discourage people from doing that because I realized. There's some good ones out there and it's a great source of motivation to have someone push you through your workouts if you can afford it.

I always looked upon, I worked with people to get them to point where they can take what I've ... help them with and do it on their own. Because they have the skills and ability to do that and to develop the confidence to do that. And then if they want to check back with me, anytime they can. I'd give them my personal feedback. That's the L part of our body building equation. Learn, which is learning what you look like, your feedback which is due to photographs, and also expert critique.

And then what you develop, what you get to look like is equal to the product of your exercise, your attitude, your recuperation, and your nutrition, and the better you do in those, they're super variable categories, the better you're going to look. That's the plan.

Dave: You are a crazily creative person. Body building itself, your approach there has been very creative. You've been playing the harmonica and a dozen instruments now but you've been playing that since you were a teenager. You're writing novels, writing books. It seems like creativity just explodes throughout all these different aspects of your life. Is that something you cultivate or is that just a part of who you are?

Frank: It happens because I'm empty. I cultivate emptiness. I cultivate clearing my mind and have nothing going on there, and when it's [inaudible 00:52:14]. It's like when you have a vacuum you open it up. Everything rushes in to fill. When I'm meditating, in the depths of meditation, I get all these brilliant ideas. Sometimes I don't even write them down because I want to keep growing. It's like the zen approach.

Do you go directly toward the goal or do you stop to enjoy the distractions along the way? Well, I do both depending on what my goals are at the time, but it's a practice. I know that all the stuff comes around when I'm open to it. It's the opposite of being. It's

not like not thinking about it, not wasting my time. I have a speculation, a false imagination. It's just clearing all that out so some really creative stuff can come through, and it does.

Dave: Would you say that you've mastered your ego?

Frank: No. I'm working on it. I am. I don't collect trophies anymore, except the little Olympia trophies. I kept those. At one time, my goal was to win as many trophies as I could, and I had about 150 of them already, and there's a room full and then I won Mr. World trophy. This is the climax. I won Mr. World trophy in Belgium in 1969. The trophy was six feet tall and it weighed 250 pounds of bronze and marble, I had to leave it there.

I got into the practice of leaving trophies behind when I won them so they could give them to somebody else, I just take the nameplate off, and so I have a lot of nameplates, but I don't have that many trophies anymore. I think that was symbolic of my ego reduction. I think that body building is about building your ego and that's what you do, you build your identify, who you are, become one with that, and it's all about competition.

The more you win, the bigger your ego gets, you make a name for yourself. You developed this sense of self-importance. It's who you are. I'm Mr. Olympia, it's all that stuff. Eventually that reaches a point where you don't really want it anymore. I don't really want it so much. I enjoyed the notoriety at times, but most of the time I just like to be, don't have the need to think about me all the time. I still had it with me, and I want to expand that [inaudible 00:54:33]. That's where I'm at right now.

Dave: Frank, if someone came to you tomorrow and said I want to perform better at everything I do as a human being. Just based on your entire life's experience, what top three pieces of advice would you have for someone?

Frank: Well, I'd say start working out. Do regular exercise program because physical activity in something like working out with weights is actually meditation and action. It's moving meditation. You learn to focus on something, develop your focus. Your concentration. Be able to narrow down your tension to something very specific and burn a hole in it. That's why I'm good at body building. I have tremendous focus.

I'm not really good at multi-tasking. I'm not good at doing more than one thing at a time, and so that has had negative consequences but it's also very positive as well because whatever I focus on, I tend to do. I also don't do a lot of things. I tend to specialize now on the things that I'm already involved in and relatively good at rather than learning a lot of new things. But I have learned new things over the years, recently like playing guitar, making flutes, I never knew how to do that.

I just became interested in it and started doing, and now I'm getting better at it. I'd say that, develop focus, concentration, workout. Become aware of yourself. Start getting photograph. Try to develop the ability to see the way yourself the way other people see you and be nicer. Be nicer. I have a poem about that.

It's about people who try to influence you to their way of thinking. Their religion for example. So to them I say, Christ or Buddha, what's it to you? It's the message, not the medium. Don't let it fool you. I learned that all the great teachings lead to the same end. Be nice. Practice empathy and kindness. You have nothing to lose putting yourself in another shoes.

Dave: Wow. What a fantastic.

Frank: It's all about that.

Dave: What about a fantastic summary.

Frank: It's all about being nice. If you can't do that, you're not going to get anywhere.

Dave: Very well said. I fundamentally believe that that's our core state is to be nice to each other and that when we're not nice to each other. It's because our mind isn't in the right place because we ate crap, because we're lethargic, and there's all sorts of things that take you off your game, but what a fantastic way of just putting it into four simple lines. Thank you for sharing your poetry on bulletproof radio.

Frank: Thanks for listening.

Dave: In 500 episodes, no one has ever recited one of their own poems on the air, so you're the first there. Frank, thank you for being on bulletproof radio. It's been an honor and a privilege to be able to interview you and learn from your life's work and thanks for all that you've done, and all that you're still doing, I'm genuinely grateful for it.

Frank: Well thanks for the interview, it's been great talking to you and learning your ideas. I'm glad you're so involved with the neuropsychology and the mind body experience. It's great. And being up there in Northern California where all that [inaudible 00:57:50] going on, it must be really nice.

Dave: It's a beautiful part of the world, that's for sure. Frank, your main body of work is at Frankzane.com, so people listening. You can tell, this is a very unusual human being. I just interviewed here with that unusual combination of mental and spiritual and physical and a teacher as well, and I would encourage you to check out his work. Just go to his webpage, it's all there.

Frank: The thing is I would like to get more people coming as many as possible that can benefit from my program the Zane experience. I've been doing this ever since the 1980 and I take people for one, two, or three day programs where I work with them privately to develop good form and exercise, and work on the other areas like nutrition and energy conservation and what we call high-tech meditation.

We use white sound machines. We've been doing that for quite a while and all that. Basically giving the whole picture of body building. What it's all about. It's not just lifting weights. I think it's the most tremendous method there is for personal growth because

it covers everything. Even yoga. Yoga is great. What it doesn't have? Well, you don't see people that. With this, we have the ability to change our appearance. It change the way we look. You really can't do that in any other areas.

What happened as a result. Not directly. We focus on that. We make it happen. So we'd be able to create what we want by doing it correctly. Come and let me show you how to do that, everybody out there.

Dave: That's in Southern California, what city is the Zane?

Frank: That's in San Diego.

Dave: San Diego. Well, the next time I'm in San Diego which happens pretty often, I might swing by for a day, I think that'd be fantastic.

Frank: Please do.

Dave: Beautiful. Frank, thanks again.

Frank: Thank you, Dave.