

# **A Special Interview with Randy Hartnell**

By Dr. Joseph Mercola

**DM:Dr. Joseph Mercola**

**RH: Randy Hartnell**

Introduction:

**DM:**Hello, this is Dr. Mercola, and today I'm joined by Randy Hartnell, who is the founder-president of the Vital Choice Wild Seafood and Organics. As a northwest Washington native, he spent more than 20 years commercially fishing wild pristine Alaskan waters for salmon, herring, and other regional species before he and his wife formed his company, Vital Choice, in 2001, which features sustainably harvested wild salmon.

And that's what we're really going to be focusing a big portion of our talk on today, especially in light of some of the movies that have just been recently released such as End of the Line, which I'm sure we can talk about. So, welcome and thank you for joining us, Randy.

**RH:** Thank you, Dr. Mercola. I really appreciate the opportunity to help educate your community about this really important subject.

**DM:**I'm wondering if you can give us some background on what led you to concentrate on organic foods and ultimately in creating your business, Vital Choice Wild Seafood and Organics.

**RH:** Sure. I spent over 20 years as a wild salmon fisherman and other species, I should mention. I loved it. It was a fantastic lifestyle. I'd still be doing it, except that there was a big upheaval in our industry about 10 years ago.

**DM:**Which is right about when you formed your company?

**RH:** Yes. Actually, it was sort of "an opportunity often knocks at the back door." Farmed salmon exploded onto world markets. Farmed salmon was cheaper. It was available year-round. And for the most part, consumers didn't really understand the difference between wild and farmed salmon. In just a couple of years, maybe five years, world markets shifted from wild salmon to farmed salmon. Every grocery store, every restaurant in America and beyond, switched to farmed salmon. That basically pulled the rug out from under the wild salmon industry.

I tried to hold on for two or three years, but it got to the point where our price just kept falling and falling, and basically couldn't make a living out of it anymore. So, I myself, and a lot of other family fishermen who have been doing that for years had to find something else to do.

**DM:**Was your business a generational business like your father and grandfather have done it?

**RH:** No. I was a first-generation fisherman. I went to college. I was going to go to law school and started fishing in Alaska to make my way through school and pay for tuition and just fell in love with it.

**DM:** Okay. And your born in the state of Washington?

**RH:** Yes.

**DM:** And just moved up there.

**RH:** That's right. Just went up there in the summers.

**DM:** Okay.

**RH:** I did it all through college. And when it was time to go through law school, I said, you know, "This is fantastic (around in nature). It's beautiful. You're harvesting food for people," which had sort of a primal... It was just really an appealing way for me to make a living.

**DM:** Sure.

**RH:** But along came farmed salmon; a lot of them fell out of our market. We ended up at the end of the season, we'd have a lot of fish caught (because it's an abundant sustainable resource, one of the healthiest foods on the planet) but nobody wanted it. It was sort of like a depression in our industry. You're ahead – not into a PhD – in catching fish, and it was absolutely worthless. So, what are we going to do?

Out of frustration, I went out with a friend, and we just started travelling around the country. We'd go to food stores like Whole Foods or Wild Oats. We'd set up our grill out in front. We'd barbecued our wild salmon. And we'd tell the story why wild is better than farmed. People were very receptive. Often we would hear, "Well, this is great, but they hardly ever have it here. Where can I get it?" Over and over again, I'd hear it. I'd have to tell them, you know, "I'm sorry. I don't know."

Then one day, a light bulb went off, and I said, "I can send it to you. I'll send you some." And one thing led to another. I was aware of Omaha Steaks, and how they were shipping red meat (that you can buy in any grocery store in the country) to people.

**DM:** More or less for convenience.

**RH:** Yes.

**DM:** Because they don't really offer any other premium cut.

**RH:** No, it's not anything special.

**DM:** Yeah.

**RH:** But what we had was special. You couldn't find it at other places. It was truly superior to the alternative. That's how we got started.

**DM:**Excellent. For our viewers who aren't quite familiar with the differences between a farmed and wild salmon, could you explain the difference?

**RH:** Sure. It would take probably an hour to tell you all the differences, but I'll summarize basically three big differences. There's the nutritional difference. Wild salmon are out eating what they've been programmed to eat for millennia. Marine organisms, they have a nutrient profile that is unmatched, unsurpassed. The full scale or the full...

**DM:**The full range?

**RH:** The full range of micronutrients – the fats, minerals, vitamins, and micronutrients. Farmed salmon, on the other hand, are fed artificial diet with artificial coloring, and everything that goes into it. There are a lot of grain products that go into the farmed salmon diet – corn, soy, a lot of which, if not all, is genetically modified. They're fed feather meal and chicken meal. I mean, it's basically like any other industrially raised protein.

Nutritionally, just like us, you are what you eat, and a salmon is what he eats. So, when you're eating that farmed salmon, you're getting a lot of things that salmons aren't supposed to eat. Mother Nature never intended them to eat that, and that's what you're putting in your body. It tastes different. The fat ratio is remarkably different. There are way more omega-6s in farmed salmon, because they're fed this grain-based diet. And that's a whole other subject, the omega-3s and omega-6s.

**DM:**Sure.

**RH:** The nutritional difference is quite vast. In the environmental difference, wild salmon are basically out there living as nature intended. They come back. You don't have to do anything. You just take care of their habitat, and they'll keep coming back every year. This year in Bristol Bay alone, one area...

**DM:**Where is Bristol Bay?

**RH:** Bristol Bay is just above the Panhandle in Western Alaska. It has the biggest wild sockeye salmon around the world. This year alone, 30 million sockeye came back, and I'll get into the management of that (fish related). But basically those 30 million sockeye that came back – the finest food on the planet. If you figure you get maybe 10 meals out of each fish, that's 300 million incredible meals that are brain-building, heart protecting-meals that you're getting out of those.

**DM:**But then you wouldn't have a future, if you took all of the 30 million.

**RH:** No. That's the surplus.

**DM:**That's the surplus?

**RH:** That's the surplus beyond. I'd love to talk to you more about the management system.

**DM:**Oh, sure.

**RH:** We can do that later. So, 300 million meals come back every year just by letting those fish go out in the ocean and range.

**DM:**Wow.

**RH:** That's just one major fishery in Alaska. Farmed salmon, on the other hand, are put in pens. They swim around closely compacted pens. Almost probably 99 percent of the farmed salmon that are raised are raised in net pens in the open ocean. All the excess food that goes in ends up going out in the environment – all the pesticides, you know, and all the antibiotics. Anything that they don't eat, all their waste, goes into the environment. This is one reason; there are many other problems.

I just like to make a plug for a website that goes into all of these in a lot more detail. I would recommend your viewers. It's called [FarmedAndDangerous.org](http://FarmedAndDangerous.org).

**DM:**[FarmedAndDangerous.org](http://FarmedAndDangerous.org).No hyphens, just all one word?

**RH:** Yes. It goes into all the details there. But don't take it from me.

**DM:**Sure.

**RH:** You go to any credible environmental organization. Pick one. There are probably 30 now that focus on ocean sustainability. I believe pretty much every one of them will tell you that wild salmon from Alaska is a super green, best choice, you know.You want to choose that. Farmed salmon is in a red category – avoid.

**DM:**Okay.

**RH:** These are some of the reasons: nutritionally and environmentally big differences between wild and farmed salmon. The other thing – and I run across this when I talk to vegetarians or vegans who are concerned about the ethical aspect.

**DM:**It's a big issue for many people.

**RH:** It is a big issue. I've actually converted quite a few of them by explaining to them that these wild sockeye salmon, which is our signature product, are sort of the vegetarians of the salmon world. They go out. They eat krill, plankton, or algae.They come back, and we catch them just as they're going off at the last stage of their life. They're allowed to live.

Unlike any other industrial-raised protein, they're allowed to live 95 percent of their life as nature intended. That last five percent is spent fighting their way up the river to spawn, or they will die naturally, if they're not eaten by a bear or something else.

**DM:**Sure.

**RH:** Or caught.

**DM:**Okay. That's why these are the surplus, because they're going to reproduce and they're not going back to the ocean.

**RH:** That's right.

**DM:** They're just going to die there.

**RH:** No.

**DM:** If no one... The entire race in there is just going to be wasted.

**RH:** It's fascinating. As I've said, I've fished in Alaska for over 20 years, so I'm intimately familiar with the management. The thing about Alaska is it actually got statehood in part to take control of the fisheries, this vast fishery resource, back from the federal government that was totally mismanaging it.

[----- 10:00 -----]

It got statehood. They built right into their constitution language that would ensure that their fishery resources would be managed on a sustainable yield basis. What that means is the harvest of the fish is completely isolated from the market. No matter how much people want to pay for salmon, it's not going to have any impact on how many salmon are caught.

What dictates how many salmon are caught is: every river has a scientist or a biologist, and he knows that river intimately. He knows what spawning habitat there is or what's the optimum amount of salmon to get into that spawning habitat, and that sets an escapement goal. Each year at the river that I used to fish (it was a river called the Egegik River), they have an escapement goal every year of two million fish.

So, when those fish started coming back in late June or early July, the biologist would monitor it. I mean, they've got planes in the air spotting fish. They've got college interns that come up and sit in towers, and they'll count fish in the river. They're monitoring the amount of fish that comes back. They could tell, you know, after years of watching the runs come back. If we got this many early in the season, we know we've got a big run coming.

Anyway, what they do is they'll open it for 12 hours, and they'll say, "Okay, you can go fishing." If they're getting the enough number of fish they want, they'll continue to give you these window openings, all the while letting fish go past. And at what set point that they get their two million, one million, five million fish, or whatever it is, then everything else is surplus. I remember in one year, we had 20 million fish come back at Egegik River, and they only wanted two million. So, those are surplus.

**DM:** In some ways, it's one of the principles that nature has. It's providing an overabundance of the seed to reproduce themselves.

**RH:** Exactly.

**DM:** Just like pollinating flowers. I mean, they produce far more seeds than is necessary to sustain the specie, but just a survival mechanism.

**RH:** Yeah. You know, we read these headlines about how all our fish are going to be gone in no time. But the wonderful thing about our business is the more you know about it, the closer you look at it, the better it looks. It's a fantastic story. Alaska's fishery management is a model for the world. You can look at their halibut or their sablefish. Basically, they've set up these fisheries management regimens to ensure that the sustainability is the priority not the market.

**DM:** Okay. So, continuing on the management thing, there is a video that was released of a movie or a film called the End of the Line. Obviously, you're quite familiar with it, because it's in your industry. I'm wondering if you could sort of summarize the film succinctly and then maybe rebuttal some of the arguments that they made in the film to give people more confidence.

One of the facts that stood out to me (if they're watching it) that they had some pretty respected researchers suggesting that with the way that we're currently managing the fish population, there are not going to be enough fish left to eat in about 30 years or somewhere in that timeframe. I'm wondering if you could summarize the film, and maybe provide the arguments that support. Just comment on it or review it.

**RH:** It's been a while since I watched the film.

**DM:** Yeah.

**RH:** And I've watched several, so I don't remember the specifics other than we need to be concerned about the oceans. We definitely are putting more of a burden on them than throughout human history. The oceans are 71 percent of our planet. So, a quote by somebody goes, "Yeah, they're 71 percent of our planet, but we have a hundred percent of the responsibility for taking care of them," and we haven't taken very good care of them. And of course, fishery resources are important to feed millions and millions of people. We've got to start taking it seriously.

**DM:** Well, it seemed that the crux or one of the points of the film is that there are these biologists and environmentalists who are really concerned about this issue. They have some pretty solid science. They know how to do the management, but then they get overruled by the commercial, the corporate, and the country's interest in finances – I think – that would skew and override their recommendations.

**RH:** Like so many things, I think we can generalize. But I think that film is guilty of that a little bit, because as I said, there are pockets that are really being done well.

**DM:** Sure.

**RH:** There is in Japan and China where aquaculture is taking off. It's highly successful. Aquaculture feeds half the planet now or provides half the seafood on the planet now.

**DM:** How does aquaculture differ from farm fishing?

**RH:** It's the same thing.

**DM:** Okay.

**RH:** It's just different term.

**DM:** Because I mean, you were really... And I'm not suggesting that the disparagement of farm fishing is on [inaudible 16:14].

**RH:** Let me get into that a little.

**DM:** Okay.

**RH:**I'll answer your question now.

**DM:** Okay.

**RH:** I'd say, basically, this is my business. I travel around the world. I go to sustainability conferences and scientific conferences, and I'm always looking for...Like you are, you know, we put out a newsletter. We want to give our people the facts. And we have a very bright community of newsletter subscribers out there like you do. They'll call our bluff, if we don't have the facts, so that's a high priority for us. There are differing opinions about whether we're going to have fish in 30 or 40 years.

Probably one of the world's foremost authorities is a fisheries research scientist at the University of Washington, Dr. Ray Hilborn, and he points out that there has been increasing concern about the ocean seafood sustainability. Right now, we probably got 30 different NGOs devoted to protecting the oceans, devoted to getting people to choose sustainable seafood.

If you actually look at the facts, a lot of fisheries are rebounding. A lot of fisheries are stabilizing. Now certainly, there are areas and parts of the world where commercial interests have overcome fisheries management. When you look at countries off the coast of Africa, they have basically given their fishery sources away to the rich European nations, so they can feed farmed salmon, Taking the fish out of the mouths of their local populations, selling it to rich countries, so they can...There are areas that there are problems.

But I will point to two or three examples of where the ocean fishery sustainability movement is really being...There are a lot of signs of success. Just last year, McDonald's in Europe decided to adopt – I'm not advocating McDonald's.

**DM:**But they are a major supplier of food.

**RH:** Yes, they're major suppliers of food.

**DM:**To the large portion of population.

**RH:** When they blink, you know, it has a big impact on the food supply chain. They came out in Europe and said they were only purchasing sustainably caught seafood fish for their fish sandwiches. It may not sound like that big of a deal; it's a hundred million fish sandwiches a year. They're not going to get those from areas that are not being well-managed. Basically, that's mostly Alaskan pollock, which is a sustainable resource.

Maersk, one of the biggest shipping lines in the world, has come out and said, "We're not going to transport any fish that isn't sustainable." Those are just two of many, many examples I could give you, where industry is...

**DM:**Oh, it's certainly encouraging.

**RH:** And it's all because of consumers demanding sustainable seafood. That's why what we do, this interview, is so important. The best message I can give your viewers is pay attention to the fish you buy. There are all kinds of seafood guides and environmental guides out there that will tell you which are sustainable and which are not.

**DM:**Are there any general principles you can provide to help people differentiate between sustainable and non-sustainable fish – the species?

**RH:** Well, any Alaskan seafood is going to be sustainable. Not that they don't have fluctuations in their resource, but in the years where the resources are down...

**DM:**Because of its management?

**RH:** Yeah. And in the years where the resources are down, no fish will be caught. This year, the king salmon in Alaska are down, so the fisheries were shut down. The only fish that make it out under the market through the Alaska...

**DM:**Are the surplus.

**RH:** Are the ones that have been caught.

**DM:**And from your 30 years of involvement with that industry, you have yet to see any blatant examples of corruption and conflict of interest which has overridden this management system?

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Because it's obvious, there's a possibility. You can have the infrastructure in place to manage it, but it's easy to violate that.

**RH:** Well, you always have the word "fisherman" who will go up...

**DM:**Right. I'm talking about the blatant abuses.

**RH:** No. Because not only do you have biologists that are basically waving the green flag and the checkered flag (as the one you can go fishing), but you've got fisheries enforcement, basically a police force that's out on the water. They're making sure that if you're not supposed to fish here, you don't go there.

**DM:**Okay.

**RH:** If you do, the fines are very steep. You can lose your boat, your fish, or your right to fish.

**DM:**Okay, big risk.

**RH:** Yeah.

**DM:**I think we have pretty well established with confidence that if you can identify authentic Alaskan fish, you're good to go. The challenge is – I would think – that there's another huge potential for abuse on the certification of it, because you can easily slap a label on it, saying it's Alaskan, and it may not be Alaskan fish. Is that a possibility? Is that happening?

**RH:** I'm so glad you brought that up, because...

**DM:**Yeah, *Consumer Reports*?

**RH:** *Consumer Reports*.



**DM:** Consumer Union.

**RH:** *The New York Times*, there have been numerous investigations to the market.

**DM:** It's somewhat similar to "grass-fed" beef, and even worse, "natural." God, what an abused term! Hopefully, that GMO legislation in California will resolve that, at least, in California. But it's a term that is essentially meaningless but has some high perceived value. Because they abuse it, they twist it around. I mean, maybe they showed the fish with a picture of Alaska, and they can call it "Alaskan." In their minds, they can justify that.

**RH:** Well, the irony is that with the demand in sustainable fish, there's obviously more incentive for people to be disingenuous, to put it nicely.

**DM:** Right.

**RH:** Both these two studies that were done in the last few years found 70 to 80 percent of the fish marked "wild" were actually farmed.

**DM:** Those are recent studies?

**RH:** No. I think that one was in 2005, and there was another one in 2007 or 2008. I mean, they're coming along fairly frequently.

**DM:** Relatively recent.

**RH:** But it doesn't seem to be changing, and the reason is it's hard to police. You've got thousands of stores across the America. I travel all over the country, I'll often go into stores, and it's very common to see mislabeled fish.

**DM:** You've been doing this for a while. Do you have any tips or recommendations that can guide consumers to choose an authentically harvested Alaskan fish?

**RH:** Well, a couple of things. One, you go into grocery stores, and almost every grocery store will have canned salmon. Canned salmon is almost always Alaskan.

**DM:** Okay.

**RH:** There just aren't other sources of wild salmon. It's always wild, and it's always Alaskan. It's probably one of the best nutritional values in any supermarket.

**DM:** Yeah. The downside of any canned food... I mean, I wouldn't disagree with that.

**RH:** The BPA issue.

**DM:** The BPA, phthalates, BPS, BPC, and BPT – all the BPA family. It's not the ideal method of containing that food.

**RH:** Well, there are BPA-free.

**DM:** Well, it's still some abuse, too, because they're BPA cousins.

**RH:** Right.

**DM:** That are just as dangerous, if not more dangerous.

**RH:** Right.

**DM:** But even though technically, it's BPA-free, these bisphenols are the challenge.

**RH:** Well, we can more talk about that later. It's the old risk-reward thing.

**DM:** Yeah.

**RH:** Are you better up buying Tuna Helper in a cardboard box that doesn't have BPAs?

**DM:** Right.

**RH:** None of us are getting out of here alive, right?

**DM:** Yeah, that's true.

**RH:** Anyway, then when you go into restaurants, this is unbelievable. I mean, I can't tell you how many times I've got an, "Oh, yeah, it's wild," you taste it, and you know instantly (because that fat profile is so different) that it's not.

**DM:** We'll get back to that in a minute. I've got a few questions on that, too.

**RH:** Sure.

**DM:** It says on the menu, "Alaskan" or "wild Alaskan salmon," you tasted it, and you know instantly.

**RH:** Generally, it won't say "Alaskan," because that's... It will just say "wild."

**DM:** Oh, so the term "wild" is more of an abused term than "Alaskan."

**RH:** Yes.

**DM:** Because that's not likely to be prosecuted, I would assume.

**RH:** It's easier to trace. What I found the simplest thing is just if you're in a store talking to the seafood clerk – or you're in a restaurant with your waiter – just ask them, "Where's the fish from?" If it's wild, they paid more for it, because they understand the value proposition. They brought it in because their customers want wild fish, so they should know where it's from. They should know it's wild Alaskan sockeye salmon. Or if they seem real hazy, they don't have answers for you, that's pretty much a red flag.

**DM:** That's a good clue. And then the other component, too, (just give us a perspective of what percentage of the fish when you go to the grocery store or the supermarket) are farmed versus wild? I mean, is that the majority are farmed?

**RH:** Well, absolutely.

**DM:** I know in restaurants, it's like 95 or 90 percent.

**RH:** Yes. I don't think it's too much different than grocery stores.

**DM:** So, it's the same ratio.

**RH:** Now, if you go to stores that are...

**DM:** That's specializing.

**RH:** Yeah. If you go to stores that cater to or that serve super health-conscious clientele, then they are more likely to have wild salmon, because they are going to be demanding.

**DM:** Okay.

**RH:** Because they know the difference.

**DM:** Okay. Ultimately, it's the educated consumer that can drive the market.

**RH:** I would like to just a minute share the story that I have about this.

**DM:** Sure.

**RH:** I was in Fulton Fish Market at New York a few years ago. I walked in, talked to the proprietor, whose grandfather started this 60 years earlier. I looked around –this is in November, so there are not a lot of fresh wild salmon around in November. I see pallets and pallets of boxes stacked up, and on the end of each one it says "Wild king salmon."

I said, "Where are you getting all these wild king salmon at this time of the year?" And he says without any guilt or hesitation, "Those are farmed wild king salmon. We sell 60,000 pounds a week. My customers won't pay for real wild salmon."

We went back, we wrote a story in our newsletter, and sent it out. A short time later, Marian Burros from the *New York Times* called me. She said, "I saw your story. We've been thinking about doing this investigation," and that's what led to their investigation.

They basically found that 70 to 80 percent of the wild salmon was farmed. But he was shipping tens of thousands of pounds of that fish up and down the coast. Every chef, every seafood clerk, and manager got that. It said, "Wild king salmon" on the end and put it out into cases. Coming from the fishing industry, having been a fisherman....

**DM:** So, the restaurant owner could be authentically sincere.

**RH:** That's right. But he probably knows that if he's only paying 375 dollars a pound or whatever, something's fishy here, all right?

**DM:** Okay. What is the price difference, typically, you know, wild versus farmed? Is it 20, 30, 40, or 50 percent?

**RH:** Okay. There's just a lot of different...

**DM:** Yeah, of the range.

**RH:** I would say the average farmed salmon is (I never buy it, so I'm not sure).

**DM:** Yeah.

**RH:** But I would say probably eight to 10 dollars a pound.

**DM:** Okay.

**RH:** Wild salmon is going to be 15 to 20 and up.

**DM:** Okay, all right.

**RH:** Depending on what it is. But one thing as a fisherman, there's the deception that's going on between the vendor and the customer.

But the other thing you may not think about is: okay, I go into store. I see this wild salmon. I buy it. I take it home, and it doesn't taste all that great. And I decided I don't like wild salmon. Boom! I'm done. I'm no longer a customer for legitimate wild salmon, which undermines my industry. And it does create long-term damage to that consumer, because all of a sudden, now they're not going to eat something that's the best thing in the world they could be eating – or one of the best things. There are a lot of victims in that scenario.

**DM:** Are there any other tips that you'd have? Because this is really a central core of this discussion: to provide our viewers with really some solid resources that they can differentiate. I mean, the price is probably one of the biggest it would seem.

**RH:** Yes.

**DM:** Because if you're paying below 10 dollars a pound for at least salmon, you're unlikely to be getting the real deal, more than likely.

**RH:** As is the case with so many things, know your vendor.

**DM:** Right.

**RH:** Buy your fish from somebody who knows fish, whom you can trust, whom you've known for a while. I mean, one of the things that we're proudest of is that we have all these endorsements from a lot of different people, because they know that what we are selling is, you know. They're going to get what they're paying for.

**DM:** Right.

**RH:** It costs more, for obvious reasons. But they can be sure that they're getting what they pay for. The problem with most grocery store chains, their seafood clerks are often not paid very well, they're not very well-educated, and they don't know the products. So, go to a seafood market.

**DM:** Okay.

**RH:** That's probably the safest way.

**DM:** Okay, that's good.

**RH:** And beyond that, sockeye salmon, which as I mentioned is our signature product, cannot be farmed. So, if you find sockeye salmon, it's very unique. It's bright red flesh, much redder than you'll see any farmed salmon. That's one way to tell.

**DM:** Okay. Now let's go back to that – the nutritional characteristics. The reason it's bright red is astaxanthin.

**RH:** That's right.

**DM:** Which is a major benefit and actually it probably has one of the highest concentrations in foods that humans eat.

[----- 30:00 -----]

**RH:** That's right. I know you're a big fan of astaxanthin.

**DM:** I'm a phenomenal fan of it.

**RH:** Sockeye salmon is your fish, because they, more than any other fish, contain astaxanthin. Now, farmed salmon, as you've probably heard, contains synthetic astaxanthin.

**DM:** Yes. I just want you to expand on that. It's pretty much universal. They're not going to be giving them regular or real astaxanthin.

**RH:** That's right.

**DM:** I think it's the one derived from mushrooms, which is actually not approved for human use, but it's okay to feed it to fish that humans consume. You've got to figure the validity of that type of logic.

**RH:** Right.

**DM:** It doesn't make sense. It's relatively irrational. But anyway, that's the reality. So, farmed salmon, from your understanding, is essentially all synthetic astaxanthin?

**RH:** Yes. I had a scientist explain to me the difference between synthetic astaxanthin and...

**DM:** Naturally occurring?

**RH:** Natural astaxanthin. He basically said that they're different isomers. If you're a chemist, you'll be able to understand this probably than I do. But he said it's like when you have natural astaxanthin, and you give it to that fish, it's like putting a right-hand glove on a right hand. But if you give it the synthetic astaxanthin, it's like trying to put a left-hand glove on your right hand.

**DM:** So you're not to be giving it?

**RH:** The body just doesn't absorb it as a fish would likely.

**DM:** Well, maybe not even absorbed, but it can't be utilized. It can be absorbed and incorporated, but it won't work.

**RH:** I read one study where there was...

**DM:** It may even cause damage, because it may prevent the naturally occurring one or block receptor sites that are supposed to benefit. It could be highly counterproductive – not ineffective, but cause damage.

**RH:** I guess it's analogous to salmon. You can say [inaudible 32:01]. But there's a huge difference between wild salmon and farmed salmon, as we've talked about. And astaxanthin is the same thing. They will generally tell you it's the same thing that's in the wild fish.

**DM:** It's not.

**RH:** But when you really look at it, it's not quite the same.

**DM:** And another differentiation you alluded to earlier was the concentration of the fatty acids, you know, one of the most important ratios, which is very difficult to do. We've been working on a simple test to offer people, but it's the omega-6 to omega-3 ratio.

Generally, the ideal release from Paleolithic times was considered to be anywhere from one to one, to about five to one, somewhere in that range, and it's disputable as to what is ideal. But it's far different from what the current approach that the average American is consuming, which is about 20 to one and in some cases 50, 60, or 70 to one of omega-6.

Now, omega-6s aren't bad. We do need them. They're essential part of the diet. We don't need them in levels that are 10 to 20 times higher than they're supposed to be. That's when it causes serious problems. And you say, "What am I going, babbling on about these?"

The big issue is that corn is not part of a fish's normal diet, and corn is loaded with these omega-6s. It doesn't have omega-3s. Omega-3s are in the weeds and the seafood that the fish eat. You get this abnormal concentration. And I'm wondering if you can comment on some of these. I'm sure you've probably looked at the studies.

**RH:** Sure.

**DM:** That actually describe that and maybe expand on that concept. But that's the basic thing. I mean, you're not going to get the right types of fats.

**RH:** Yeah, I didn't get into too many details when we're talking about nutrition, but that's a huge one.

**DM:** Yeah.

**RH:** Wild salmon typically has 600 to 1,000 percent more omega-3s compared to omega-6s.

**DM:** Yeah.

**RH:** So, maybe a farmed salmon is one to one omega-3s and omega-6s. Wild sockeye salmon is six to nine to one. If you're trying to address that imbalance, you're trying to increase your omega-3s and get back closer to that three to one or whatever, you're not going to do it with farmed salmon.

**DM:** You may think you are, but you're not.

**RH:** Yes.

**DM:** You simply aren't.

**RH:** Oh, you aren't going to do it as efficiently. Certainly, these omega-6s, as you well know and probably have talked a lot about, are being linked to all manner of chronic diseases.

**DM:** It's not so much even the absolute value, it's the ratio.

**RH:** Yes.

**DM:** This overabundance of the omega-6s. And they're pervasive in processed foods, which is really one of the biggest culprits that are really responsible for this whole mess.

**RH:** One thing: a very good friend of mine is considered by some to be the world's foremost authority on fatty acids. He approached us a couple of years ago and encouraged us to have one of these omega-3/omega-6 test, because it seemed like such a natural fit with what we were selling. I have read a lot and learned a lot about that whole issue. And yeah, people do want to strive for something close to even or to tissue levels that are even in omega-6s.

**DM:** Now, another important component that I'd like to discuss (and I think you're really the ideal person for this because you've studied it quite a bit) is the concern that most of the major waterways in the world are contaminated with mercury, other heavy metals, and chemicals like dioxins, PCBs, and other chemicals that get wind up in the food supply. The mercury gets there.

It's not commonly known, but the majority of the energy currently being produced in United States is from burning coal. Coal is loaded with mercury. It basically is vaporized, goes in the air, drops back down into the ocean, gets recycled into the food chain, and bioaccumulates. The bigger the fish – like tuna – the more it has. The whale would be the ultimate, you know, soy you don't want to be eating whale meat.

**RH:** The biggest mammals.

**DM:** Yeah, it's huge. They've been around for so long, they've consumed so many lower-level creatures that it just bioaccumulates to very high concentrations. I'm wondering if you can comment on the mercury issue.

And I personally have had recently some test done that very precisely differentiated between organic and inorganic mercury and identified that I was contaminated with mercury. Surprise. I'm actually currently finishing up a detox program for that. But the source of it was seafood. My guess is (because we have previous discussions on this) that I was becoming a little careless in my selection of seafood. Actually, the only seafood I would eat was from your company – the salmon – because we had tested it a number of times.

I still think that was the majority that I was eating, but when I would go out to restaurants I really... Like most people, I really enjoy the taste of fish. I think it is – no doubt in my mind – in an ideal circumstance, maybe 100 or 200 years ago, certainly 200 years ago and before that, one of the finest foods on the entire planet, bar none. Absolutely no question about it. But now you've

got this industrial pollution issue that we have to contend with. And what is the ideal 21<sup>st</sup> century food? Those are the concerns that knowledgeable people have, and I'm wondering if you could respond to that.

**RH:** I'd love to respond to that. As I mentioned, you know, our customers are some of the most nutrition-conscious people on the planet. Everybody's worried about methylmercury. Mercury is toxic at a certain dose, right? It's like so many things that it's like – oh, anything. I mean, if you drink too much water, it will kill you. You can go back 10,000 years and dig up specimens of people that lived near the water and ate a lot of seafood, and they have mercury in their hair.

Mercury has always been in the marine environment. Half of what's there comes from underwater volcanic activity. Now, we have started burning coal less than 200 years, and definitely it has added some, but it hasn't increased appreciably. Base levels haven't increased that much. But the point is that those fish, if you were eating fish a hundred years ago, they would have mercury in them, too. It's all about how much.

**DM:** So, you think that concentrations aren't significantly different?

**RH:** Well, certain areas, certainly in industrial areas.

**DM:** Like Minamata Bay or something, where there's industrial pollution.

**RH:** Well, that, yeah. A lot of people use that as an example.

**DM:** Yeah.

**RH:** That was such an off-the-charts anomaly, you know.

**DM:** Yeah, industrial contamination.

**RH:** The levels were hundreds of hundreds of times higher than you'd get in any fish, maybe even whale, I don't know. Because people in my company, my family, our families, we eat more of our seafood than anybody, this is a big issue, you know. We've reached out. We've looked at the science. And really, the science is that people that eat the most seafood, the populations around the world that eat the most seafood, are the healthiest. They're not falling over with toxins.

People in Japan, including pregnant nursing women, eat fish every day. They eat it twice a day at many times. Yet, they have much lower infant mortality rates, they have much higher longevity, and they have some of the lowest rates of heart disease and cancer in the industrialized world. So, if mercury and seafood was really that much of an issue, you wouldn't expect to find, you know, those.

**DM:** Well, they may not manifest in cardiac disease or even cancer, but it may be some autoimmune degenerative diseases such as MS.

**RH:** Well, the bottomline is that if I'm going to be born anywhere, you know, I'd like to be born somewhere where I have high odds of surviving birth.

**DM:** Sure.



**RH:** (Which they do) and high odds of living a long healthy life with very few diseases. But if I could just add to that...

**DM:** Sure.

**RH:** Put all that I aside, we could say that's anecdotal. First of all, if you weighed the studies, if you had a scale, and you put all the studies that are in favor of seafood consumption on one side and all the studies that point to mercury toxicity on the other (from seafood), it would be so vastly out of...

[----- 40:00 -----]

I mean, there are thousands of studies that show that people that eat seafood are healthier than people that eat a Western diet.

**DM:** Yeah. Which I think supports the benefit of getting animal-based omega-3s, not necessarily plant-based.

**RH:** Yes, that's right. But really, what it does is it begs the question, you know, risk versus reward. Yes, there's going to be a trace level of methylmercury in seafood or any food for that matter. Because now, as you know, we can test parts per trillion. It's just vanishingly small amounts. If you don't draw a line somewhere, you'll be afraid to eat anything.

**DM:** No. And our body does have the capacity to detoxify this, and that's not a fancy woo-woo term. I mean, there are really specific biochemical mechanisms that have been around since we've evolved from whatever you believed.

**RH:** Yup.

**DM:** That actually are responsible for attaching, finding that item requirement, and eliminating it from the body. We have the capacity to do that.

**RH:** Yeah. There's a scientist named Nick Ralston. I don't know if you've read any of his work before, but he focused on the role of selenium in detoxifying methylmercury.

**DM:** Yeah.

**RH:** Because they were trying to figure out...

**DM:** It's a co-factor for glutathione that helps eliminate it, which has that methyl group from cysteine to actively bind to the mercury to excrete it.

**RH:** The body uses selenium to make its own antioxidants.

**DM:** Sure.

**RH:** We make all of them from food, right? Seafood is one of the best sources of selenium. Dr. Ralston figured out that... He basically looked at the molar ratio of methylmercury and selenium in different types of seafood, and he figured out pretty quickly that most fish have way more selenium in them than methylmercury. The exception would be the large predatory fish that are

high in mercury. And this explains why when they've done these studies, people that eat a lot of seafood aren't mercury toxic. Because they're getting so much selenium, that they're basically self-detoxifying.

**DM:** That's interesting. I mean, it just didn't occur to me that you mentioned it. But these predatory fishes, which are eating other fishes, and these other fishes have probably eaten other fishes, so it just bioaccumulates up the food chain. You're far better off getting a vegetarian fish.

**RH:** Eating toward the bottom.

**DM:** Or the bottom.

**RH:** The sardines, anchovies, salmons...

**DM:** Well, smaller fish?

**RH:** Yeah.

**DM:** But even a larger fish like salmon. I don't know. What's a big salmon, 20 pounds?

**RH:** Well, the sockeye salmon are five or six pounds, but the thing is they don't live very long.

**DM:** Right.

**RH:** They have a short life span.

**DM:** But do they eat other fish?

**RH:** Sockeye salmon, like I said, eat at the very bottom.

**DM:** Okay.

**RH:** They're eating algae and krill. You can't get a troll-caught.

**DM:** So, they're essentially vegetarian fish.

**RH:** Yeah. You can't get a troll-caught sockeye salmon.

**DM:** Yeah.

**RH:** Because they don't feed on other fish. I mean, maybe there's some exception.

**DM:** That's a very important distinction.

**RH:** Yeah. That's what Vital Choice does.

**DM:** Yeah.

**RH:** That's how we address it. We only source fish that we know are cleanest and eating at the bottom of the food chain. And with other fish, we do have halibut, which can grow quite large. We have Albacore tuna, which can grow quite large. What we do that's different is we – and we'd do what you would do. When I go down to meet the boat and buy the fish, I have to size

and grade them, and I say, “I only want those, the smallest tuna,” or “We only want the 20-pound-and-under halibut.” Seriously, that’s what we do.

It was interesting the first time we did that with our tuna fisherman. I met him down at the dock, told him that we only wanted his smallest tuna, and he just said shaking his head, “You know, all my years growing up with my dad on his boat and all my life fishing, they’ve always told us those were the trash. They wouldn’t pay us anything for the little fish.”

Yet, we would later find that they had higher omega-3 levels, more healthy fat, and much lower contaminant levels. They’re much more expensive to process, because you’d get a lot less meat off of a small fish than a big fish. But our customers get the value proposition, so they’re willing to pay for that. That’s what we do.

**DM:** Okay, great. Just going back to the vegetarian salmon, the sockeye, are there other species that are like that, too?

**RH:** Yes, the pink salmon. The pink salmon only live two to three years, so they’re even shorter-lived. The flesh is quite different. It’s not as firm. But you can find pink salmon in any grocery store, the canned again. The chum salmon is similar. It’s really just the coho and the king salmon that tend to eat a little bit higher on the food chain.

**DM:** Okay.

**RH:** Yet their mercury levels are not significantly higher.

**DM:** But they would be a bit higher because they’re eating higher up the food chain.

**RH:** A little higher. But just to put it in perspective, one study that came out I think in 2007 was published in *The Lancet*. It’s the biggest, most robust study ever done on this topic of mercury and seafood. The hypothesis when they started this study – it was called the ALSPAC study (Avon Longitudinal Study of Parents and Children).

They looked at 14, 000 women and their kids, and they tracked them for over 10 years. I’m sure they’re still tracking them. The hypothesis was that the women who ate the most seafood would have kids that had the most developmental problems, because of the higher mercury levels.

When they finished the study, they discovered that it was exactly the opposite. It was the women that had eaten the most seafood who had children that had the least developmental challenges, whether you’re looking at social skills or motor skills. The kids that were born to the moms that ate the most seafood had the highest I.Q., had the highest social I.Q. They looked at many different end points, and it was pretty dramatic.

It led them to conclude that guidelines such as the FDA was putting out at the time (they have since changed it) that pregnant women should eat no more than two servings of fish per week. Well, they’ve determined that women who are actually abiding by that recommendation or eating the equivalent amount of fish were actually doing more harm than good. The recommendation was actually harming the women and harming the children.

The FDA has since raised it to “at least.” It was a major change, but they said “at least two servings per week,” and of course, of certain species.

**DM:** So, there's no upper limit of restriction?

**RH:** No. In fact, there was no upper limit. The more seafood that pregnant women ate, the better the outcome for the children. And this was a rigorous study – Jean Golding and Joe Hibbeln from the National Institutes of Health.

**DM:** And was there still exclusion of the traditionally recognized fish that are high in mercury such as tuna?

**RH:** That was in the U.K. I don't know what they were.

**DM:** Okay.

**RH:** I doubt that they were. It was just general seafood consumption.

**DM:** Okay.

**RH:** Whatever their common species are, probably a lot of herring or cod. The other thing, just again back to the sort of governmental guidelines on mercury consumption, it was interesting for me to learn that those are, for the most part, based on a study that was done in the Faroe Islands that showed there was some relationship between seafood consumption and abnormal outcomes in children. But when you really look at that, the seafood they were eating was pilot whale. And many times, they were eating in a...

**DM:** Oh, which has one the highest concentrations in the world.

**RH:** Yes.

**DM:** Of mercury.

**RH:** So, when they started trying to figure out a safe guideline level for mercury consumption, they looked around, and they couldn't find any science saying that there's a problem with it, until they went there. That's what they used.

**DM:** It somewhat reminds me (that story that you just shared) about the vitamin D. The concern for vitamin D toxicity (really which was largely responsible for limiting the RDAs to the absurd level of 400 units a day, which is almost absolutely useless) was based on a study done in India with three or four people. I forgot the specific details, but it was absolutely absurd. It just continued for decades, and they all relied in this one useless study. When in reality, if you go all the way back and checked the details, it never panned out. It kind of reminds me of that. It's just gosh, you know. So what is the basis of their concern?

**RH:** In the ALSPAC's study, the conclusion was, "Okay, there may be some adverse impact of the mercury, but it's vastly outweighed by the benefit." Also, it's worth mentioning, as you, as a doctor know, that everybody's different. Some people don't process methylmercury the same way or anything. There's a whole bell curve of the way people process these contaminants. But in general, it looks like most of the world's population processes seafood in a way that benefits them and that's not detrimental.

**DM:** Recently, one of our staff members accompanied you on a trip to Alaska to view some of the fisheries and some of the beautiful environment up in Alaska this past summer. I get to see some video of that trip, and it was just amazing to see the process.

[----- 50:00 -----]

I'm wondering if you can comment and maybe briefly describe the process. Because it was really astonishing to me, as my staff member had commented on this whole process on how you harvest these fish, take out the eggs, you inseminate them, and then you actually sort of repopulate these fisheries with these eggs. So, if you can expand on it, because really, I'm sure most people watching this have no idea this is going on.

**RH:** Yeah, in some areas of Southeast Alaska, there are hatcheries where they will do as you described. The fish will come back in. It's basically just a way of enhancing the fisheries return. It's much different than salmon farming. Salmon farming, those fish are enclosed in that pen their entire life, eating whatever it is they're fed their entire life, versus this (they call it) ocean ranching in Alaska, where the wild salmon come back, they will take a relatively few of them, they will take the eggs out, fertilize them, raise them until there are little fingerlings, and then release them into the ocean.

Now, it's important to note that these hatcheries are placed away from truly wild spawning habitats, so that these fish are not going to come back, go up, and mix in with the wild fisheries.

**DM:** Oh, interesting. How many do they grow?

**RH:** Pardon?

**DM:** Is it millions that they do, or hundreds of thousands?

**RH:** I think that Alaskan salmon harvest is up to 140 or 150 million this year, and probably 40 percent of that...

**DM:** Well, in the hatcheries, how many? How many do they grow in the hatcheries?

**RH:** I'm not sure honestly.

**DM:** Okay. It's probably a few millions.

**RH:** Oh, several millions.

**DM:** Okay.

**RH:** There are numerous hatcheries, but most of it is pink salmon and chum salmon.

**DM:** Okay.

**RH:** And neither which we sell.

**DM:** Okay.

**RH:** There are a few sockeye hatcheries.

**DM:** I would mention pink salmon has less astaxanthin, because it's pink, not red.

**RH:** Yeah. Nothing compares to sockeye. Some of the king salmon or silver salmon will have more. But anyway, it is a remarkable thing to watch. Now, this is, in my opinion, you know... We could talk about aquaculture. I think it's really important to distinguish between sustainable aquaculture and non-sustainable aquaculture.

**DM:** Or traditionally-viewed farming.

**RH:** Right, salmon farming or fish farming.

**DM:** Can you also comment on some of the other adverse consequences to the ecosystem that traditional fish farming has?

**RH:** The adverse consequences of fish farming?

**DM:** Yes.

**RH:** I would say specifically salmon farming.

**DM:** Okay.

**RH:** Because there's a vast amount of aquaculture around the world, you know, shellfish. That's all positive. We need more of that.

**DM:** Okay. Thank you for differentiating that.

**RH:** Yeah, sea vegetable farming. My goodness, you know, they're rich source of nutrients, unbelievable – kelp and seaweed. We need more of that. I don't want to get labeled as somebody who's anti-fish farming. I'm not at all. I'm a big fan of aquaculture. It's the unsustainable forms of aquaculture that are problematic.

And it's only when consumers demand sustainable aquaculture that we're going to start seeing it, because it costs more to farm salmon in a sustainable manner. You got to take them out of the water and put them in closed containment pens on the shore. Now you've got power to run the pumps. It isolates them from the marine ecosystem, which is a good thing. But you've got to pay for it. Right now the marine ecosystem is subsidizing farm salmon. That's why it's cheaper, because the farmers don't have to pay to get rid of all the waste.

**DM:** One of our big initiatives is the California Ballot Initiative, to help people have the right to choose whether or not they're going to be consuming genetically engineered foods. I'm wondering if you can give us an update on the genetically engineered salmon – if that's been approved, if it's implemented, or what the status is.

**RH:** They've been working on it for I think, at least, 10 years now, and it was getting pretty close to being approved here in the last year or two. As you probably saw, there was a huge hue and cry against it. As far as I know, it doesn't look like there's going to be much demand for it.

**DM:** Okay.

**RH:** GMOs in general is a huge topic these days, which you are helping to educate people about.

**DM:** Well, one of the dangers with fish farming, as I understand it, is the risk that these containment systems are going to fail.

**RH:** They do all the time.

**DM:** Yeah.

**RH:** I mean, all they are is net pens out in the water, so a sea lion or something...

**DM:** It's not a matter of "if," it's a matter of "when."

**RH:** Well, it's "how often" really.

**DM:** Even worse.

**RH:** Because they do. Over the last 10 years, there have probably been over millions of farmed salmon that have escaped into the wild to compete against the wild fish.

**DM:** Do they compete effectively?

**RH:** I don't have any evidence of that.

**DM:** Okay.

**RH:** I did see information one time that they were populating local streams. But I would refer you back to the Farmed and Dangerous website, because there's a lot of information there.

**DM:** Sure. But that would be the concern with these genetically engineered salmon that are just monsters. They're going to farm them, and then they're delusional to think they're not going to escape and start populating the entire ecosystem out there.

**RH:** Supposedly, they're...

**DM:** They're all sterile?

**RH:** Sterile.

**DM:** Oh, okay.

**RH:** That's what they're saying.

**DM:** Yeah.

**RH:** But supposedly, you know, mine tailings aren't going to leak into the environment. But I mean, you know, it's pretty hard to put your faith in it.

**DM:** Now, one of the statements that you're known for is that "The best way to save truly authentic wild salmon is to eat it," and I'm wondering if you can expand on that logic.

**RH:** Sure. Yeah, that seems counterintuitive. But basically, if you go back to where we started (where I talked about how farm salmon was undermining our industry and myself and a lot of other people had to get out of fishing because we couldn't afford to stay in it), all those

communities in Alaska that rely on salmon fishing for revenue had to go find something else to do. So, now you've got mining interests, oil drilling interests, tourism, all taking the place and filling in where the fisheries resource used to supply revenue for those people.

But none of those alternatives benefit the salmon habitat. One example: I used to fish out of Ketchikan, Alaska, a sleepy little fishing town. I go up there every year to go catch herring and salmon as well. As the fishing industry collapsed, they started courting the tourism industry. Now you can go up there, and it's not unusual to see four or five mega cruise ships on top of Ketchikan. Now, those can't be good for the salmon habitat.

The bottomline is the fishing industry is the biggest advocate for wild salmon. Our lives depend on those runs coming back. Anybody gets in their way, we're going to stand up and fight the oil interest. Chevron wanted to buy leases at Bristol Bay – just as an example.

**DM:** That's an accident waiting happen.

**RH:** Now it's going on right now. I'll tell you more about this later. I've got some other information. But there's a gigantic mining interest that's trying to put a large open-pit mine at the headwaters of Bristol Bay. You've got these 300 meals worth of salmon just nature delivers.

**DM:** Three hundred million.

**RH:** Thirty million salmon times 10 meals?

**DM:** Yeah, 300 million.

**RH:** Meals, just nature delivers on our doorstep. All we have to do is protect the habitat, and there they are.

**DM:** Yeah.

**RH:** We don't feed them. We don't do anything other than catch them and ship them to people's door. And yet this mining interest is coming in, the Pebble Mine. If your viewers want to look it up, just Google Pebble Mine. This can be one of the largest open-pit mines in the world at the very headwaters of Bristol Bay, Alaska.

**DM:** It's already approved?

**RH:** No.

**DM:** Okay.

**RH:** It's well long in the permitting process. Right now it's the EPA that is kind of standing in the way, and the Clean Water Act. It just remains to be seen. It's so many. It's so valuable. Potentially, all the minerals in the ground are worth billions and billions of dollars. But who are the leaders?

**DM:** The fishermen.

**RH:** It's the fishermen. If you don't buy wild salmon, those fishermen don't have a job, and they've got to go somewhere else. All of a sudden, the barriers to those outside interests that are



not worried about saving salmon are going to go away. That's what I mean by "You want to save wild salmon, you eat it."

**DM:** That's good. Now, you obviously provide salmon commercially direct to consumers. People can go to your website and purchase this salmon, this phenomenally healthful, pretty much guaranteed authentic.

[----- 1:00:00 -----]

There's no possibility that you're going to get something that's not being as it is claimed, because you'll be out of business otherwise.

**RH:** No.

**DM:** There's just too much of risk for you.

**RH:** This is more than a business for me.

**DM:** Yeah, it's a passion, so there's no way you're going to be doing that. They're going to get the real deal if they order from your company. But do you sell to big commercial interests like food chain stores like Whole Foods?

**RH:** I get asked about that a lot, and we don't.

**DM:** You don't.

**RH:** Here's the reason.

**DM:** What's the reason? You can't produce the quantity they require?

**RH:** Because I'm a seafood snob. I grew up in that industry.

**DM:** Okay.

**RH:** I pride myself on giving people the very best. And frankly, it's not all... I mean, just because it's wild, just because it's from Alaska, it may be very nutritious, it's going to be sustainable – but there are different ways of harvesting and different ways of processing.

**DM:** It's a very important point. Why don't you differentiate those and help our viewers understand the difference between salmon provided by you...

**RH:** Sure.

**DM:** Versus another authentic wild Alaskan salmon that might be sold at Whole Foods.

**RH:** Well, first of all, when the salmon come back from the ocean... They come back over a period of time, and when they first come back, generally, they're bright, vigorous, beautiful skin. They're just prime. They're ready to go up those rivers.

**DM:** Like a young athlete.

**RH:** Exactly. I mean, one other huge difference between wild and farmed salmon is wild salmon is subject to the laws of nature. It's out there in the ocean, trying to avoid being eaten every day of its life. If it's sick, if it's weak, it's called out. It never makes it.

**DM:** Nature takes care of it. Yeah.

**RH:** When it does get back, those are all the prime, the very best fish. And as the time goes on, and the laggard starts coming back...

**DM:** Let me just interrupt you for a moment, because of personal ignorance and curiosity. At what stage in their life do they come back? How old are they when they return?

**RH:** It depends on the species, but on average, four years.

**DM:** Okay.

**RH:** I can talk a long time about the different types of fish and different life cycles. But in general, the sockeye salmon come back after four years. Some come after three. Some come after five. It's sort of nature's insurance policy.

As the season goes on, more fish come back, or maybe they've come back and they've been milling around near the river mouths for a while and their skin starts darkening, what happens when those salmon go upstream is they stop eating. Basically, there's not enough food in the rivers for them, so they don't feed.

When they come back from the ocean, they have to be packing the calories they're going to need to get to the spawning grounds. Now, is the spawning ground 50 miles up the river? Is it a thousand miles up the river? That's going to have a huge impact on the fat in that fish in that particular river.

**DM:** Sure.

**RH:** So, what we do is we go to rivers where they have longways to go, so they're much richer. They're much fattier. They have a lot more.

**DM:** But those, they never make it?

**RH:** That's right. Maybe you've heard of Copper River king salmon?

**DM:** No, I haven't.

**RH:** Or Copper River salmon. Copper River is in Prince William Sound area of Alaska. It's unique and it's a rapidly dropping, rapidly flowing river. It's fed by glaciers. It's icy cold. Those salmon coming back to that river have to navigate seven nautical currents to get up where they're going. It requires a lot of energy. So, Copper River salmon have probably some of the highest fat levels.

**DM:** Do you harvest from that river?

**RH:** There is so much demand for those fish. They're the most expensive fish you'll see. You will see 40 to 50 dollars a pound there.

**DM:** That is sort of the...

**RH:** But because the connoisseurs, they want that – and all over the world. There's only a few amount. I can tell you more about that later, because this year we did sell some, and it was pretty amazing what happened.

But anyway, as those fish come back, some go straight up the river, and some are milling around. When they stop feeding, basically they start living on their resources. Interesting about sockeye, when they start living off their resources, what happens is that astaxanthin, it migrates into the skin, so they'll start turning blush and the further up the river they go.

By the time they get up the spawning grounds, their body is the color of your tie. They're known as red salmon. You might have seen pictures of them. Point being, that all those nutrients are being burned, and there's less in the flesh. You don't want fish once they've hit the river. I mean, there is still some amount of nutrition there, and there are markets for every type of fish or every grade of fish. We've opted to focus on the prime, the sort of the tip of pinnacle of quality.

Now, back to your original question. Whole Foods, Kroger, and grocery stores across America, even if they want wild salmon, they're not going to pay this, because they're so price-sensitive. They're going to buy this one, this one, or this one. I've seen all of them in the supermarkets, and most consumers don't really know the difference. They think, "Why would I pay 15 dollars a pound, when I can get wild salmon for 10 dollars a pound?" But I want to emphasize that if it's wild, it's from Alaska – it's going to be good nutrition. It's just on a scale of where it is.

**DM:** Is the taste and flavor an issue, too, as you get the higher-quality salmon?

**RH:** Definitely.

**DM:** Are there any recommendations that you'd have or guidelines that you can provide people to know how to differentiate the quality just by the flavor?

**RH:** I'd have to be careful here. Most of the salmon that you find in the grocery store, that's from Alaska – fantastic nutrition. I would not discourage you from buying whatever you can afford. If you want to spend more to get the very best, it's there. That's what we offer. But I wouldn't discourage you if you go into a Safeway, you see "Alaskan salmon," and you're convinced it's Alaskan salmon. It may not be a troll-caught, prime fish, but that doesn't mean you should be discouraged.

**DM:** What do you mean by troll-caught, prime?

**RH:** It's a fishing method, basically one at a time.

**DM:** Oh.

**RH:** Hook and line brought aboard.

**DM:** Is that the way you use in our company?

**RH:** Our king salmon and our silver salmon are troll-caught. Yeah.

**DM:** Okay.

**RH:** It's the best way.

**DM:** And that's the highest-quality salmon you typically provide other than the Copper River salmon that you have occasionally?

**RH:** Well, okay. We sell sockeye salmon, king salmon, and silver salmon.

**DM:** Okay.

**RH:** The king and the silver salmon are troll-caught. Sockeye salmon, I remember we talked earlier how they're [inaudible 1:06:58] basically.

**DM:** There are so many of them.

**RH:** They don't eat, so they won't hit our lure. You can't catch them.

**DM:** Oh.

**RH:** Generally, you can't catch them.

**DM:** Okay.

**RH:** Those are net-caught.

**DM:** Okay.

**RH:** The river system puts its imprint on the quality of the fish. The fishing method...

**DM:** The flavor, too, are [inaudible 07:14].

**RH:** The fat and flavor go hand in hand. The more fat, the more flavor, the better the texture, the mouth feels all of that.

Another huge factor is: how was a fish caught. Now in Bristol Bay, you have millions of millions of these salmon coming back. It's like this incredible natural miracle, you know, these fish coming back every year. But at the peak of the season, that can be hard for industry to keep up with. Like I said, remember that one year we had 20 million fish come back just to our river. There's no way you can stop them all. Your nets fill up. You get them onboard at the boat. They're not going to be handled as well, just by the nature of the fishery.

**DM:** Yeah.

**RH:** They're not going to be handled as well as the fish that were caught one at a time. Or if you go to catch sockeye at another part of the state where the volume is much lower, they're handled better. They go through the processing, sort of pipeline a lot faster, and so they're going to emerge from the other side in better shape. Every time you touch that fish, they're incredibly delicate. Every time you touch them, the quality doesn't get any better. We say that fresh caught is like a melting ice cube, as far as the quality. It degrades quickly.

So, what we do is we buy the best fish, process them, flash-freeze them, vacuum-seal them, and basically lock in that quality level at that point. We maintain that until we deliver it to people.

When they thaw it out, they're going to get basically the quality-grade that came out of the water. As opposed to when supermarket gets it, if it's frozen, they'll thaw it out. They'll put it on ice. Ice cubes start melting again. And those incredible polyunsaturated fats (that are one of the big reasons we all eat seafood), as you know, are really unstable, so they'll tends to oxidize. That's when you end up with fish that doesn't taste too good.

**DM:**And that doesn't smell so good either.

**RH:** That's right.

**DM:**That's terrific. Do you have any tips, I guess, for people who would be interested in purchasing products from you or any other vendor really that's going to provide high quality? I've done this in the past, and it seems just from a non-wasteful optimized efficiency perspective to maybe purchase a few months' supply at once, because shipping is a big expense in this equation. If you're purchasing a few, you're going to pay more for shipping than you are for the product. The higher the volume, the lower shipping you'll pay per piece of fish.

**RH:** Yeah, we offer most of our products in three different sizes, and we encourage people to buy the larger sizes if they want to share with their neighbors or other family members.

[----- 1:10:00 -----]

**DM:**Oh, it's actually the size of the fish that you share?

**RH:** No, the pieces are the same. It's just the packages.

**DM:**Okay. Thank you.

**RH:** You know, you could buy six pieces if you want to try it out. Buy 12 pieces or 24 pieces. Of course, the bigger packages are lower cost per pound, and then we offer free shipping on anything over 99 dollars.

**DM:**Okay.

**RH:** That will get you over that threshold.

**DM:**Okay, interesting.

**RH:** And then the other thing is we basically take all the risk out of it by giving a 100 percent satisfaction guarantee.

**DM:**Yeah.

**RH:** Because we would go broke quickly if people started calling us on that. That's another reason that we think it's worth it to buy our products.

**DM:**That's a very powerful guarantee. I've been very impressed with you, because we've known each other for 10 years, pretty much since you've been in business I think or close to it. I've always been impressed with your ability to stand behind your product, to be an educator about this whole process that you're doing in sustainable fishing (you're really a leader in the field in

that perspective),and really providing a product that... I mean, how much better of a guarantee can you provide than that?

If you don't like it, you know, you get your money back. You don't even have to send it back, because obviously that would be crazy.

**RH:** I think many people are so delighted and amazed that it does taste good. It isn't like anything they've ever had before. I met a woman here not too long ago that approached our booth. We were doing demos at a conference. She turned up her nose and she said, "I haven't eaten salmon in 37 years. I'm not about to start now." I said, "Well, maybe you've just never tasted good salmon." Because a lot of people think that they don't like salmon or they don't like seafood, and it's because there's a lot of bad seafood out there.

**DM:**Would you say the majority would be fair to say – of salmon?

**RH:** I don't want to say, but there's a lot of fish out there.

**DM:**Oh, how many people would know better than you? I mean, you know them.

**RH:** I try. When I travel, I will always try the fish just to see. And it's disappointing most of the time, I would say.

**DM:**Okay.

**RH:** Not always. That's one of the real crimes of selling bad fish. You turn people off to seafoods. So, this woman approached, and she said she just wouldn't eat seafood. I said, "Well, maybe you've never had good salmon." I opened up my wallet, I put a five-dollar bill out on the table, and I said, "I'll give you five dollars if you try my salmon, and you don't like it." Her husband looked at me like, "Buddy, you just lost five dollars. She won't even eat my fish when I bring it in off the boat." I said, "Well, just try it."

I put a little piece in the cup and handed it to her. She chased it around perimeters. Finally she looked at the five dollars, she stuck it in her mouth, and she goes, "Wow. That tastes like chicken." I don't know why. I guess that was the closest protein she'd had to...

**DM:**Yeah.

**RH:** Anyway, she asked for more, and she stood there at my booth for 30 minutes, telling people about, "You've got to try this. I didn't think I liked fish."

**DM:**She's a convert, a new convert.

**RH:** Yes, that was one of the happiest moments of my life, when we enlighten people. That if you think you don't like seafood, maybe you just haven't had good seafood. And it's worth trying, because it's so phenomenally good for you.

**DM:**Yeah, there's no question it's one of the healthiest foods in the planet. Assuming you could address the toxicity issue, and you've commented on that earlier. I'm wondering, though, sort of another level of insurance in your review and experience in this, if there are any strategies that

you've become aware of that have been particularly effective to mitigate against the potential danger.

I could think of one, which would be swallowing some chlorella shortly after you ate it, because the chlorella will bind (as well as the fish is still in your gut) to the mercury there. You won't absorb it; you'll just excrete it in the stool. Do you have any thoughts on that? Because this is a big...

**RH:** I'm going to give you an anecdote.

**DM:** Sure.

**RH:** Here's the anecdote. I've been a fisherman for 30 years, and I'd say for the last half of that I eat fish every day. I've been tested for methylmercury. It's probably the highest side of normal. I mean, I'm travelling with pouches of our tuna.

**DM:** Sure.

**RH:** And I've watched people around me. My wife had – she's going to kill me for saying this. She had several chronic medical conditions that the doctors had told her were genetic. She had terrible allergies. She had what they call "chicken skin," you know.

**DM:** Atopic dermatitis or eczema?

**RH:** Doctors told her there was nothing they could do about it. It's genetic. When we started the company, started getting educated, started eating more fish, started lowering those pro-inflammatory omega-6s (because that's an equal part of the equation, right?), all of that cleared up, and other things I won't go into now. It was dramatic, the improvements in health.

I think that maybe the stress from worrying about contaminants exceeds the benefit. I mean, if you're worried about it, if you may be one of those people that know processed mercury correctly, then you have to be careful. You have to take some measures, maybe the chlorella, cilantro, or whatever.

But I think my impression – and I'm not a scientist or a doctor; I hang out with lots of them – after 10 years is that just choose clean seafood species. They're rich in all these micronutrients that boost our immune system. They'll make our cells healthy. They'll make every part of our body healthier. You're going to be way better off than if you avoid it.

**DM:** Sure. Well, you've provided us with loads of solid information, useful tips, resources, and strategies that we can incorporate to eat healthy and continue to avoid diseases using food as one of our primary tools. Because really, 80 percent of our health comes from the foods that we eat. Are there any other issues or items you'd like to discuss, mention, or expand on?

**RH:** Just reiterating: choose sustainable seafood. You can go to our website. We have a great page. We have a tremendous amount of information on that.

**DM:** And your website name is?

**RH:** It's VitalChoice.com.

**DM:** Okay.

**RH:** We have lots of 24/7 customer service. If you have any questions, feel free to call us.

**DM:** Money back guarantee.

**RH:** Money back guarantee. It's all good. Probably, the biggest thing is we also have the omega-3 and omega-6 test if you want to get those tissue levels. Whether you're eating our fish or somebody else's, it's important. And this goes to your question earlier about sustainability and the fish resources. Dr. Joe Hibbeln at NIH makes the point: if you lower the omega-6s, you don't need as many omega-3s. It's about the tissue level.

**DM:** Sure. It's the ratio.

**RH:** He did a study looking at different countries around the world. In the Philippines, you need maybe three grams a day to get to an ideal ratio, because they eat a lot of fish. In the U.K., you need 20 grams a day. And I'm not sure about the numbers, but in the U.S., you need like 30 grams of fish oil a day just to balance all those omega-6s, the huge amount of omega-6s.

Well, obviously, if you eat fewer omega-6s from your processed foods, you don't need as much fish. If you eat more of the vegetable omega-3s, the leafy greens, walnuts, and flaxseeds, all of that will help balance that ratio.

**DM:** Sure. Yeah. I'd just like to emphasize one point (that you did necessarily in concluding this), that it's the sustainability issue. And that by choosing to consciously seek out certified truly wild authentic Alaskan fish, or salmon specifically, you are actually making a positive move at sustaining that, because this is a well-documented, virtually no-room-for-corruption, elegantly managed harvesting system that's absolutely sustainable.

**RH:** Yes.

**DM:** Because if it's not, then the industry disappears. By seeking to purchase that on a regular basis, you're actually creating more demand for that, giving those fishermen more ability to resist potential threats to that environment. It's good for everyone.

**RH:** Yes. And the other thing, the other part of that equation is you're taking pressure off of the non-sustainable sea species, so that they can rebuild. If you tell your grocer that "I only want you to buy fish from the [inaudible 2:29:59]."

**DM:** That's a very good point! That's a converse of that.

**RH:** Then they'll stop buying those, and the shipping alliance will quit shipping them.

[----- 1:20:00 -----]

**DM:** Yeah.

**RH:** The stores will quit stocking them, and then they can rebound. Because we do know how to manage fisheries sustainably. The bottomline is there will be an increasing demand for those



sustainable species. The price will continue to go up, but you have to look at the whole picture, the whole value proposition.

**DM:** Sure.

**RH:** It's one of the last truly wild, naturally organic foods on Earth, and you should expect to pay more for it.

**DM:** Yeah. Well, I really thank you for coming to Chicago to educate us and me specifically. I feel so grateful to have this opportunity to be educated and learn stuff all the time about new information that really is going to help our viewers certainly, but me also, because it would really help modify my impressions on some of these important issues. I appreciate that.

Thank you for all that you're doing and for being such an important resource for people to provide them with the source of food that's going to make them healthy and keep the environment healthy.

**RH:** Thank you, Dr. Mercola. I appreciate that you're helping us to get the message out.

**DM:** All right.

**RH:** Thank you very much.

**DM:** Okay.

*[END]*

## **Part 2 Randy Hartnell Interview**

By Dr. Joseph Mercola

**DM:Dr. Joseph Mercola**

**RH: Randy Hartnell**

**DM:** You know, I'm a huge fan of technology, and I can't help but believe that there's some new tech advances – like maybe even apps for the iPad, iPhone, or your Androids (smartphone or tablet)– that can help us identify these healthier choices or help us differentiate between the healthy versus the non-healthy seafood. Do you have any?

**RH:** I'm so glad you asked. Yes, Monterey Bay Aquarium has a very good app that basically will give you the best choices of fish to avoid. Put it right on your smartphone, you go into the supermarket, you look at the species, you look it up, and it will tell you what grade.

**DM:** Interesting. You'll know if it's sustainable at least?

**RH:** That's right. Yes.

**DM:** Okay. And you'd just go to the app store, type in "Monterey Bay," and it comes in?

**RH:** I would Google it first and then find out.

**DM:** Google it first, and then find out the name of the app.

**RH:** Yeah, I'm sure. And there are others. There's a Seafood Choices Alliance. There's a whole bunch of them. You could probably go to the app store and search "sustainable seafood."

**DM:** Okay.

**RH:** Or "seafood" and I'm sure something would pop up.

**DM:** Okay, great. That's another important resource. Because we really want to make those wise choices to encourage the market to move in that direction, so that not only we, but our future generations will have access to this healthy type of food.

**RH:** One other thing I wanted to mention is, as I mentioned earlier, there are more than 30 different environmental organizations focused on ocean sustainability. Probably, the gold standard is the Marine Stewardship Council (MSC.org). They probably do the most robust science or put the most robust science into their certifications. We've been a member for over 10 years. It's a lot of work on our end, because you have strict chain of custody tracking. But like anything, the validity comes from that.

**DM:** You're MSC-certified?

**RH:** Yes. Now, it's not a blanket certification. It's by species. All of our Alaskan products are MSC-certified, our Canadian salmon is MSC-certified, and even our salmon oil is MSC-certified.

**DM:** I believe the krill that we sell is also MSC-certified.

**RH:** That's right.

**DM:** And people aren't aware of that, the gold standard of sustainability is this council.

**RH:** Exactly.

**DM:** You can't cheat that system. I mean, you can't pay anyone off to get this certification.

**RH:** That's right. It's a little blue logo. Just go at [MSC.org](https://www.msc.org) to learn more about it.

**DM:** Okay, great.

*[END]*

### **Part 3 Randy Hartnell Interview**

**Randy Hartnell:** We talked a lot about mercury in seafood and other contaminants. One issue that has come up in the last couple of years is radiation. Since the disaster in Japan, the nuclear meltdown, a lot of people are concerned about radiation in seafood. We had a lot of customers inquiring. There were a lot of sort of sensational headlines out there. People really want to know if their seafood is safe, and we want to know.

So, what we did is we took 16 different species that we sell. We went on and found what we felt was the most credible lab that tests food for radiation.

Fortunately, it all came back clean. There's a scale – Becquerels per kilogram – that is used. Just to put things in perspective, a granite countertop has 1,000 Becquerels per kilogram. The EPA level for drinking water is 750 Becquerels per kilogram. Most of the seafood came back with zero Becquerels. The only two exceptions were our tuna and halibut that came back with 1.4 and 1.5 Becquerels per kilogram.

Essentially, all of our Alaskan seafood, specific northwest seafood, I think is extremely safe, and in many cases, no radiation detected. That's a program we intend to continue with.

Those tests were taken about a year ago. We have samples out now, so we'll be reporting those results. But listening to the scientists who are supposed to know the most about this, we feel that our seafood continues to be safe. We want to validate that for our customers, so we brought in this independent lab to do the testing.

Really, as I said earlier, our families consume more of our seafood than anybody. And, of course, we feel a strong obligation to our customers to give them the cleanest, purest, possible seafood. This is just another way that we do it.

*[END]*