

Real Food/Fake Food: Why You Don't Know What You're Eating and What You Can Do About It: A Special Interview with Larry Olmsted

By Dr. Joseph Mercola

JM: Dr. Joseph Mercola

LO: Larry Olmsted

JM: When you go to the restaurant or grocery store, you likely have no idea of the high likelihood of food fraud with your purchasing options. Hi, this is Dr. Mercola, helping you take control of your health. Today we are joined by Larry Olmsted who wrote a fantastic book, *Real Food/Fake Food: Why You Don't Know What You're Eating and What You Can Do About It*, that we're going to discuss. It's just loaded with solid information for people who eat food. Hopefully, you're one of those people. If you are, you're really going to enjoy this. Welcome and thank you for joining us today, Larry.

LO: Thanks for having me.

JM: Alright. Your take on this is really interesting because you're not – you're an investigative journalist for sure. But you're not really a food scientist or a PhD in that, but you are a food critic and you're a journalist. Why don't you tell us your story of how you came about to be motivated to write this great book and a little bit about your background as to how it all came together?

LO: Sure. I've been writing about food and travel for a wide variety of newspapers and magazines around the world for over 20 years. I write the Great American Bites Restaurant column for USA Today and I write on food-related topics for a lot of other publications. In my travels or whenever I go someplace, I try to eat what the locals eat, whatever the specialties are. I came upon a few cases – when I went to Japan and I tried Kobe beef, and when I went to Italy and had some things – where I would come back and try to replicate those foods either on my own or in restaurants in the United States, and it never really tasted right or looked right or seemed right. Particularly, in the case of Kobe beef.

I did a little research into why I couldn't get any good Kobe beef here. I learned quickly that there was not Kobe beef here. All the restaurants pretending to serve Japanese Kobe beef were lying, every single one in the country. I wrote a story about that for Forbes. It got a phenomenal response and I ended up just continuing to research this topic and it evolved into this book.

JM: It's a terrific book. I can't praise it enough. It's divided really in two sections because you really love food. I mean it's very clear from your writing. You enjoy it and there's nothing wrong with that. But you really enjoy it and your passion shows through the book. But there are some sections – my focus is more on health so those components are not as important to me and a lot of our viewers. But there's this large section of your book that discusses the food fraud, which is just massive.

I'd like to talk now, before we go into specific types of food, about the FDA and the confusion most people have about it. There's the general impression that the FDA is policing and regulating this food fraud, when in fact, nothing could be further from the truth. Why don't you enlighten us on this?

LO: I mean the FDA spends a considerable amount of its energy on nutritional labeling info, so that when you turn over the back of something you're buying, it show you how many grams of sugar are in it, the ingredient label. That's really their focus, as well as tracking disease outbreaks. You know, when somebody gets sick from eating at a fast-food restaurant, that's something they devote a lot of resources to.

What they don't devote a lot of resources to is, I think, the safety and integrity of the foods we eat every day and also what I call the front of the label. While they're very particular about nutritional labeling and ingredients, they're not at all particular about the way our food is marketed, sold, and portrayed to us. A great example would be "natural." An amazing amount of things say "natural" and the FDA is in charge of regulating that and they're doing a heinous job.

JM: It's not really well-defined in any way, shape or form. It provides a liberal use of that term. Basically, it's a bastardized term at this point. In fact, most people who are passionate about natural health look at the word "natural" on food as a warning that this food is probably dangerous for you because it's mislabeled. They're seeking to fool and deceive you. It's very clear. That's a great example, though.

But one of the most pervasive areas of fraud – your book is loaded with them. There's so much information – is the seafood industry. I'm a bit saddened, disheartened and angry actually at this because seafood, in my view and in my estimations, is one of the healthiest foods on the planet. All of us need regular doses of seafood if we ever have any hope of staying healthy ideally. Yes, you can get them from supplements, but ideally you want to get it from food, which is why your book is so important, because it exposes this fraud. Even non-fraudulent seafood, most of it is contaminated with mercury, dioxins and PCBs. That's an issue.

But assuming it's not – I believe you say that it's the number one source of fraud. That when you go on almost any restaurant, the likelihood that you're going to get what's on the menu is very, very small. Why don't you spend a considerable amount of time on exposing this deception, because it's so important and so many of us are absolutely confused on this?

LO: Sure. I should just preface seafood by saying that well I came at the book from the approach of a food writer and a food lover. The sort of happy synergy is that the foods that are more real and taste better also are almost always better for you. I know your interest is more health, but they kind of go hand in hand. In every chapter, I give tips for buying the real thing. Those are going to be foods that taste better and are better for you.

Seafood is a great example because they're – you're right, people should be eating seafood. It's probably the healthiest source of animal protein out there. There's lots of seafood that is good for you. It's just a matter of making sure you're getting what you're buying. That's really the issue.

A great example is salmon. The American people have demonstrated both in their buying habits and when polled that they greatly prefer wild caught salmon to farmed when they're buying, even if it's more expensive. However, the problem is – and it's always more expensive – but the problem is sometimes you go and you buy wild-caught salmon, you pay a premium for it and you're still getting farmed salmon.

If your goal was to avoid the things that are used in aquaculture, which include vaccines and antibiotics, then you're really getting doubly defrauded. You're getting ripped off financially and you're getting ripped off at least from your perception of what's healthy and what's not.

JM: They're also including herbicides like Roundup and glyphosate because they're fed grains, which fish were never designed to eat, in this aquaculture arrangement. It's just a mess of bad food. Sorry for interrupting. I just wanted to add that additional toxin you're exposed to. If you don't get this thing right, the information you provide helps us get it right.

LO: Absolutely. You bring up a great point, which is that – I don't want to paint aquaculture with a broad brush as being bad. There are some good aquacultures. It's much more problematic when you get saltwater fish and carnivores. Salmon are both of those things. As you mentioned, in the wild, salmon don't eat grain. They eat other animals. But there are a lot of fish that are not carnivores. Fish farming works a lot better for them.

In general, the problem isn't just fish farming. The bigger problem is what they call specie substitution, which is most common with white fish, which are the vast majority of the fish that we eat in this country.

The prime example would be red snapper, which is the single most defrauded fish. You go into a restaurant, you order red snapper. It's expensive. It's one of the most expensive fish you can buy, and the reasons are because it tastes great and it's also always wild caught. There's no such thing as commercially farmed red snapper. You should be getting a great fish when you buy red snapper especially because you're going to be paying top dollar for it. The problem is, very often, you get a completely different fish served to you. Almost always an inexpensive farmed fish like tilapia, probably imported from Southeast Asia, probably farmed under fairly dubious conditions with little or no supervision.

This is not something that happens once in a while. This is something that happens with red snapper more than 9 out of 10 times. You could go out for a week and order red snapper every day and there's a good chance you're never going to get it.

JM: Yeah. It's massive and pervasive. That's one great example of this substitution. You provide a whole wide variety of excellent tips that one can use to assure you that you are not being defrauded. Maybe we can go over some of those tips now because they're simple and practical and really obvious common sense, but not unless you really reflect on it for a long time.

LO: Another good alternative is to buy from your local fish monger if you trust them. If there's a particular type of fish that you know you like. You buy tuna and you enjoy it, and you go and you buy tuna and it meets your specifications, then you can take a leap and say "Hey. What else

do you have that's good?" You can develop a level of trust. It's not just with seafood. That works with cheese and butcher shops. It's sort of an old school model of having a local purveyor.

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Then if you're going to buy at more generic big box retailers, there are a number of third party labels that you can look for that verifies the quality of your seafood. The best known one is the Marine Stewardship Council. They have a little logo that says MSC. It's a blue check mark in the shape of a fish. They have auditors who go at it and certify where the fish came from and how it got to you. If it's farm-raised, you want to look for the symbol from the Global Aquaculture Alliance (Council) Best Practices.

I like to buy any seafood that comes from Alaska. Alaska aquaculture is illegal across the board. All Alaskan fish is wild caught. They have some of the cleanest water, some of the best maintained and most sustainable fisheries. The state of Alaska has their own logo they put on seafood. It says "Wild Alaska Pure." They spend a lot of money defending that logo. It's one of the more reliable ones. It's particularly good if you're buying canned salmon, which a lot of people don't think of. Everybody thinks of canned tuna. But you can buy canned wild-caught salmon. It's a cheaper way to get wild-caught salmon, and sometimes a little bit easier to deal with.

JM: That's a really good tip. It's relatively inexpensive. You can be assured, if it has that Alaskan seal on it, there's very little to no fraud in it. Any fraud is possible in any circumstances, but for the most part, it doesn't exist for that brand or for that specific type of fish.

One of the other ones and in fact one of my favorite seafood, bar none, is shrimp. I like it far better than lobster. I was really saddened, and you convinced me because you had a pretty strong statement in the book towards the end where you will never, unless you know where those shrimp are taken, you will never purchase shrimp at a restaurant because you can be almost 100 percent guaranteed it's like from Indonesia, fed terrible food, which is going to be all these toxins you're going to bioaccumulate in the shrimp. Plus, the slave labor conditions that the people who are harvesting them are under. It's just atrocious. I mean you just don't want to subsidize or support any type of operation like that. Why don't you expand on that because it was a fascinating exposé?

LO: Shrimp is the single most consumed seafood in the United States. We love our shrimp. We eat more pounds of shrimp than any other fish. That's a fairly recent phenomenon. I know when I was growing up, shrimp were still a, like you mentioned, sort of akin to lobster. They were considered more of a celebratory special event food. You'd go out to a fancy steakhouse and you'd have a shrimp cocktail, and that would be a splurge. There was no perception that you would go to some fastfood restaurant and pay 9.99 and get all-you-can-eat popcorn shrimp.

As we adopted that model that shrimp should be cheap and readily available, the only way to provide that was to farm them very cheaply, mostly in Southeast Asia. There are a lot of problems with that. One is where they locate the shrimp farms. They typically clear cut mangroves, which are nature's filtration system and defense against tsunamis. It's really bad for the environment. A lot of waste and chemicals dumped directly to the ocean's crust.

You mentioned the social justice issues, well-documented use of slave labor in production of farmed shrimp. It's kind of a triple whammy. Bad for us, bad for the world, bad for the people involved, and the shrimp frankly doesn't taste very good. That's the whole reason to eat shrimp. You're lucky. You live in Florida. You can actually probably buy locally caught shrimp. I do like wild-caught shrimp from the Gulf of Mexico. Though, the problem again being sometimes you go to the store and you buy a bag that says "wild-caught shrimp" from the Gulf of Mexico, and it simply is not. There's a lot of fraud with shrimp.

Last year in 2015, the FDA had a record number of what they call import refusals for shrimp, meaning they test samples of shrimp being imported. They find they contain unacceptable levels or simply unacceptable antibiotics that are banned because they're known to be dangerous. Some of the antibiotics used in shrimp farming are not allowed to be used in food production in the United States because they're carcinogens. I don't know if it's getting better because they just had the most cases of this they ever had in a single year.

JM: Yes indeed. Why don't you provide us with your guidelines? You're essentially of the position that you will never order shrimp unless you're absolutely convinced of its source, which should be, really, if you're in the United States, the Gulf of Mexico. But even then, you still have the challenge. I don't know how bad of a – I haven't read any recent literature, research or studies on this.

We had the Gulf oil spill not too long ago. If that wasn't bad enough, they put this dangerous chemical called corexit to hide the problem essentially, keeping up all the goo. But it was actually far more toxic than the oil. I don't know how much of an issue corexit is with seafood from the Gulf of Mexico. Maybe you can provide some guidelines of the rare circumstances where you think it is okay to order shrimp in a restaurant.

LO: I think if I'm in a seafood restaurant, say, the gulf coast in Mississippi or Alabama or the Florida Panhandle and I just have a feeling, similar to a Maine lobster shack or New England clam shack, if I'm fairly certain that when they say they're buying their fish or shrimp locally from the fishermen, that they're telling the truth, it's local, a place where a lot of shrimp is produced, I'll make that leap. Usually, again, you could tell the shrimp tastes better.

In particular, shrimp is something that is never going to be really cheap. Even if you're buying it at the dock, there's a sort of a minimum price per pound. If you see a deal at a restaurant that seems too good to be true, it almost certainly is. I'll eat shrimp that I honestly believe comes from the Gulf of Mexico or off the Atlantic Coast of Florida. The Carolina State has pretty good shrimp. Up where I live in New England, the Gulf of Maine produces excellent shrimp. But for the last two years, they've set the quota at zero to allow the stocks to recover, so there is no shrimp from the Gulf of Maine.

It's very difficult to find farmed shrimp that's produced in the United States. If I saw it, I would actually buy it because the shrimp farming in the U.S. is very clean. But it's not price competitive. It's still sort of an experimental stage. It's almost impossible to buy domestically farmed shrimp.

JM: If you were to do that, what type of price per pound would you think it would range from? In the 20 dollar per pound range?

LO: I mean the shrimp that I'm comfortable buying at the supermarket would be in excess of 18 dollars a pound.

JM: Okay. That's what I thought. Any other highlights or insights you'd like to share about the seafood industry? Because it's such a powerful exposé that you've provided.

LO: Sushi in particular. A lot of people read my book and said "You ruined sushi for me." I love sushi but of all the restaurant niches, probably sushi is the rifest with fraud. The way to avoid that is to go to much more expensive sushi restaurants that fly in all their fish fresh. Places like Masa in New York and Nobu in Las Vegas. But you're going to pay top dollar for that.

If you want to eat at your local sushi place and feel a little bit more comfortable, I really recommend eating nigiri sushi or sashimi where you can at least see some of the fish. So many people in this country eat rolls where you have this sort of pencil-thin little tube of grayish meat that claims to be tuna wrapped in rice. You can't look at it. You can't see anything. You can't tell what it is. Studies have shown often that it's not tuna. If you want to want your sushi, try to eat at better places.

Try to get it in bigger pieces you can see, ideally the way sushi has traditionally been prepared, where you can sit at the sushi bar and see the chef cutting it from an actual piece of fish. Again, I talked about that kind of popcorn shrimp phenomena in the U.S. We've turned sushi into something that you expect to come prepackaged in a clamshell box at the supermarket. That's not what sushi should be about.

JM: Okay. Many people perceive sushi as a healthy alternative. They go to these restaurants and they're being defrauded. In general, I'm somewhat concerned about tuna because it's a very large fish that could be hundreds of pounds. The larger the fish, the more time they've had to bioaccumulate these toxins. They're typically pretty high in mercury. Anyone consuming tuna needs to be cautious about that and have some proactive measure to counteract that. Otherwise they would need to check their mercury levels and detox because it's a pernicious neurotoxin.

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Let's move on to olive oil. We've done lead stories on this in the past. Especially after 60 Minutes exposed earlier this year the fraud that's rampant in olive oil industry. They have done a piece that connected it to the Italian Mafia, essentially exposing the 16 billion dollars a year of olive oil that's adulterated with a really cheap, oxidized, omega-6 vegetable oil, which is pernicious to health in a large number of ways.

What I really enjoyed about your chapter in your whole story about olive oil, because I have olive trees. I live in Florida. I never knew how to process those olives, but now I know after reading your book. It's a fascinating story because as a food lover, you really go into the details

that you need to know on how to get the healthiest, most optimal food. Maybe share the olive oil circus. It's truly fascinating.

LO: Italy makes some delicious extra-virgin olive oil and they make some very good real extra-virgin olive oil. But the problem is a lot of what is exported from Italy is not their best product, to say the least. People associate olive oil with Italy when they've done perception studies of American consumers. The thing that they look for most is that the oil comes from Italy. But coming from Italy is not the same as being made in Italy.

Italy is the world's largest exporter of olive oil, but they're also the world's largest importer of olive oil. They buy up oil from all over the Mediterranean basin – from Tunisia, Syria, Morocco, Spain – blend it, bottle it. Often it's labeled bottled in Italy, which is technically true. It was shipped to Italy and put into bottles, but it's not Italian olive oil. When people buy that, they're relying on some sort of myth of Italian quality. Italy doesn't even produce enough extra-virgin olive oil to meet its own domestic demand. While you can get very good olive oil from Italy, it's trickier than from some other countries.

I reckon I give a number of tips for people to shop for olive oil. But what people need to understand about olive oil is that it's essentially closer to fresh-squeezed fruit juice than it is to most of the other oils we're familiar with.

All of your seed-based oils – soy, peanut, canola oil – you have to get oil out of a seed, which is very difficult. It's done through a chemical or distillation or thermic process, which can also affect the nutrients, whereas olive oil is very simple. You crush an olive, or more common today, they spin the olive in a centrifuge until the juice is expelled by gravity. But in either case, to be defined as extra-virgin olive oil, it can be nothing but the juice mechanically extracted – which means crushing or spinning an olive. No additives, no heat, no chemicals, no processing whatsoever, other than crushing it. The same way you would make fresh orange juice, except you start with olives. As a result, olive oil has a fairly short shelf life compared to other oils.

Again, you wouldn't buy a bottle of fresh-squeezed orange juice, open it, take a swig, put it in your cabinet, leave it there for two years and expect it to be good. But that's what lots of people do with olive oil. But the bigger problem is that it's what a lot of stores do with olive oil. Olive oil is shipped here by slow boat. It takes a long time to even reach the shelves. It sits there on the shelves, sometimes for years. Most bottles of olive oil have a "use by" or "sell by" date on them, which consumers can't really be blamed for believing means something but it really does not. There's no law. There's no regulation. It'll be those producers who will put on a date that's so far out that that olive oil will never get tossed by the store for being too old.

What people need to know is that the date that they want to be looking for is the "pressed on" date or "harvest" date, which are essentially the same thing because olives go bad almost immediately after being picked. They're always pressed into olive oil basically the same day. Great olive oil is pressed within a couple of hours of picking. Bad olive oil might be picked or crushed 10 hours after it's picked. But the "harvest" date and the "pressed on" date are essentially the same. That's what you want to look for. Ideally it should be less than 6 months

old. The problem is that very few bottles of olive oil actually have that date, certainly none of the big supermarket brands.

JM: One of the solutions that you offered – this may be surprising to many, but I think 60 Minutes confirmed this too – is that the big box brands like Sam's and Costco in the United States seem to have a supply chain logistics in place that really confirms and certifies that their source of origin is correct, and the purity is fine. It's not adulterated. Was that the results of your evaluations and your investigation?

LO: I found sort of across the board that the big box stores do a better job with their supply chain of almost all the food. It was true for seafood as well. People are really surprised to hear that I feel more confident buying my seafood or even olive oil at a BJ's or Costco than my local supermarket.

I think the best way to buy olive oil is that any store that will actually let you taste it, which is typically not a supermarket and not a big box store, but a lot of gourmet stores or specialty retailers. There is sort of a chain of olive oil and vinegar shops that are all across the country. In big cities, some of the nicer supermarkets will let you taste the olive oil. Because once you taste good olive oil, you can never go back to the bad stuff. It's pretty clear when you taste it and smell it that it's fresh, that it's fruity, that it's a whole different ball game. That's sort of the best way to buy it.

Another thing is to look at some other countries that people don't really associate so much with olive oil, but do a great job. I'm a big fan of Australia. Most of the experts I talked to say, across the board, the best most reliable quality. Australia also has separate legal standards from what most of the rest of the world uses for olive oil, which are considerably stricter, the testing and the grading.

I like a lot of the new world olive oils: California, Chile, South Africa. Basically, any place where grapes grow well for wine, olives grow well in addition. Like what I said, there's great olive oil coming from Italy but not all olive oil comes from Italy. Spain is the largest producer of olive oil in the world, but very few American consumers think about going out and trying to buy Spanish olive oil.

JM: Let's get a perspective on the fraud that's pervasive out there. As we mentioned earlier, the reason it's so significantly served is not necessarily just for the taste – that's actually relatively minor – but for the health aspects. Because if it's adulterated, usually with, I believe, sunflower oil because the texture or the viscosity are pretty similar. Usually, of course, it's typically grown in conventional agriculture so it's going to be loaded with pesticides and herbicides. And more importantly, it will be oxidized. It's just loaded with omega-6. Instead of getting the omega-9 that olive oil is known to be, oleic acid or beneficial fatty acid, you're getting omega-6, which actually causes health problems in excess, especially if it's oxidized.

What would your estimate be of the prevalence of the fraud? As I said earlier, 60 Minutes estimated it to be 80 percent, but in your book you said it's far more. It's well in excess of 90 percent of the oils sold in the – let's address it from two points, the oils that you're buying in

your regular grocery store, not the stores that you just mentioned, and then the restaurants, which is another issue. It has been my experience, if you're going to eat a salad, you never put olive oil on it. If you could respond to that, that would be great.

LO: Sure. There have been a lot of different studies done and a lot of different – A lot of consumers don't even understand what extra-virgin olive oil is. I'm going to explain that quickly so I can talk about some of these studies.

When olive oil is made, as I mentioned, it's just you crush an olive, you get that juice. It is then graded. It's graded in two ways. It's graded through laboratory testing. There are certain benchmarks for it to be called extra-virgin. It has to have a certain number for free fatty acids. There are a lot of standards. They test it in the lab and it's got to meet all of these minimums for it to be graded out as extra-virgin.

There's also sensory testing, which is very unique in the food world. There are not many foods that have to be actually tasted by experts before they can be labeled. Olive oil is one of those. I think it's 16 specific defects that they list. These are things like musty. An expert palate will taste the olive oil. If it has any one of those defects, it cannot be graded extra-virgin. Extra-virgin is supposed to essentially be perfect.

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I kind of compare it to gasoline. When you go to the gas pump, there's regular gas, there's premium, and there's ultra-premium. Extra-virgin is supposed to be the highest grade, ultra-premium olive oil. Below that is just regular virgin. Below that, any olive oil that does not fall into those two top grades, extra-virgin and virgin, is deemed unfit for human consumption without further processing. That processing is then to essentially distill or refine that oil to get rid of the impurities, which a lot of people also believe gets rid of a lot of the health benefits of olive oil.

The single biggest adulterant in fake extra-virgin olive oil is not sunflower oil, though you will find that and peanut oil. It's actually refined olive oil, which is much harder to detect because it's from the same source. But it's not virgin olive oil by any means. When they do these tests to see how much of our olive oil is adulterated, they typically buy olive oil in the store. 60 Minutes, they only did one of the tests. I forget which one. They either did the sensory test or the laboratory test, but they did not do both. Some of the studies do one, some do both.

The biggest source of data is the University of California Davis Olive Center, which has done repeated tests of both supermarket oil and food service oil in restaurants. They've typically found somewhere around two-thirds of the oil to be fake, to not meet the standard of real extra-virgin. It's varied in their tests, but usually in the 60 something percent range. Then when they tested the five leading brands of supermarket olive oil in the country, they did worse. The worst performer was 94 percent of the time. But it has been getting better in recent years. Their tests are a little bit old. Some of the olive oil industry accuses them of skewing a bias towards California oils.

But I've been following this and there have been numerous tests on this just in the last year in other countries – in Germany, in France. Typically, the results are anywhere from about 45 to 65 percent fake. I think it's fair to say that at least half of the olive oil on our shelves is problematic.

JM: Okay. Most likely more, especially if it's inexpensive. Can you use price like you do in seafood, as a parameter for the likelihood of it not being unadulterated?

LO: Not so much as in seafood because there are some good oils that are inexpensive. Even at the opposite end, there are a lot of expensive oils that are not good. Lately, olive oil from Tunisia has been getting a lot of praise. But because there's not a lot of demand for it, Tunisian olive oils are pretty inexpensive. You can buy a bottle of extra-virgin olive oil that's of good quality that I'd be happy to consume for under 10 dollars. You can buy a bottle for 35 dollars that I totally would not want to use. But I would say, on average, a good bottle of olive oil is going to cost you between 15 to 20 dollars, which is probably sort of the market average. It's, again, something that's —

JM: How big is that bottle? A quarter or a liter for a bottle?

LO: That would be either 750 milliliters, like a wine bottle, or a quart, depending on where it's packaged.

JM: Okay.

LO: The average American only consumes one bottle of olive oil a year. It's one of those things. I consume a lot more. I consume about a bottle a month personally, which would put me on par with the Italians. The Greeks consume a bottle every two weeks. They lead the world. But it's one of the things for the amount that Americans use, you can afford to splurge and get really good oil or wine. If you're going to drink one bottle of wine a year, you would not hesitate to pay 25 dollars for a good bottle of wine.

JM: Sure. That makes a lot of good sense. Do you have any recommendations or precautions or tips when you're in a restaurant to identify if in fact it's safe to use their olive oil on your salad dressing?

LO: Yeah. I mean there's going to be olive oil used in the food almost certainly, especially if you're eating any kind of Mediterranean cuisine – Italian, Greek, Spanish, French. They're going to use olive oil on the cooking. There's not too much you can do about it. My biggest recommendation would be is not to ever use the stuff that they give you to dip bread in. That's probably the lowest common denominator when they give you a bowl of green stuff and some rolls, way to fill you up cheaply with cheap food.

For the salad dressing, it's trickier because a lot of times, the oil is not in the bottle that it came in. They put it into a little cruet or a little glass bottle set with the vinegar for you to mix, so you can't really see the label or anything. Sometimes you can, but it's one of those things where if you want to have an oil and vinaigrette dressing, as opposed to dressing that's probably even less healthy, bleu cheese, ranch or something. You know. Moderation.

If you have a little bit of olive oil on your salad once in a while, it's not going to be a big deal. It's like you mentioned with tuna. It's different if you have it once on a while. But if you do it every day, then you have to be more careful.

JM: Let's go back to seafood for a moment because there's a question I neglected to ask you. Some of the healthiest seafood, I believe, are the smallest fishes. That was supposed to be anchovies or sardines or even mackerel. You can get them fresh but it's a little bit more challenging, and far more convenient to get them in tin cans from your grocery store. I'm wondering if you could comment on the potential for fraud on that.

The second question to that is, frequently they're packaged in olive oil. Most likely, it's probably the lowest of the lowest brand. You'd want to not get it in olive oil. If it's not possible, then you'd want to drain as much of that stuff off because it's not good. Maybe comment on the likelihood of fraud in that form of seafood and then the olive oil issue.

LO: Most chefs agree with you. Chefs are really mad for these small fish – for anchovies, herring and the like. They've never been really as popular as things like tuna or salmon with mainstream consumers. But they're delicious. They're good for you. There definitely is less fraud for a couple of reasons. One is, even in the tin, you're still essentially seeing the whole fish. Sardines, they can't chop up another fish and make it look like a sardine.

The other thing is they're relatively inexpensive. There's less fraud whenever something is inexpensive because there's less money to be made substituting a lower quality. In fact, with seafood in general, if you go into a restaurant and you see something like a spiny dogfish on the menu, you're probably safe. There's no market in faking spiny dogfish or catfish or a lot of the inexpensive fish. It's always the pricey ones. These small fish, they're whole. They're inexpensive. They're fairly plentiful, and the selection in cans and tins and jars has gotten much better in recent years.

I buy a lot of those products from Spain. Spain is really known for the quality of its canned seafood. Usually now, I see choices like you'll see "packed in olive oil" or "packed in water" from the same brand. They have more than one option.

You're right. I think that's a good time to avoid the olive oil. Because when it's used as packaging, it's incumbent upon the producer to basically use the cheapest olive oil they can get. Even if you drain it, which you should do, there's still going to be – it's hard to get oil off of anything. You can also sometimes buy them packed in salt. But the good news is that there's a lot more options that are used to be, even in mainstream supermarkets, for those products.

JM: Typically when we think of anchovies in the United States, they're in a little 1-ounce or 2-ounce tin, loaded in salt and olive oil. It's really hard to get them at your grocery store not in olive oil. But if you go online, it's pretty easy to find them packed in salt. In fact, they come in big packages like 2- to 3-pound tins, just loaded in salt, lots of salt, which of course you have to wash off. But at least there's no olive oil. That's what I've been using typically, those types of anchovies, because I really like anchovies. One of my favorites.

LO: Yeah. You can throw a couple in a salad and really add a lot of flavor and protein.

JM: Yeah. Most importantly, the most important fat for humans, which is docosahexaenoic acid (DHA). That's why I believe seafood is so essential is because it provides really the optimal form of DHA. If you don't get that, you're just simply not going to be optimally healthy, at least in my view. It's important for optimizing biological functions. That's why I have anchovies or sardines virtually every day and actually fish roe, which is almost impossible to be fraudulent. But even though it can be pretty pricey, so there's a market for fraud. But that's a really good tip that you've given, is to use the price indication. If it's a really expensive fish, the potential for fraud is just increased exponentially. Good point.

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We've provided two great examples, the olive oil and the fish. Your book was into far more areas, really started to get to the epicurean food lover's components like Parmesan cheese and Romano cheese. I think you started the book out where you were at this trip. You actually went to Italy, in these towns where they make them. It's just a fascinating story of what you've compiled, how they process this cheese, how much this is worth, and how it's identified. Maybe you can just review that briefly because it's really a fascinating story.

LO: Sure. I started the book by taking a little trip to Parma, Italy, which I consider one of the great food production places in the entire world. Parma is not a city a lot of American tourists go to, the way they go to Florence or Venice or Bologna. Parma is something we know even if we don't think about it, because so many foods come from there. The most famous would be Parmesan cheese and prosciutto di Parma, both named for this city in Italy. It's also where Parmalat, which is the single largest Italian food company, is based. Barilla Pasta, the largest pasta maker in the world, is in Parma.

Parma is sort of the food epicenter of Italy. They have been making these cheeses – Parmigiano-Reggiano, the king of cheeses, as known in the dairy industry – there for about 800 years in the same way it's made today. It's one of the most strictly regulated, most wholesome, purest foodstuffs you can buy. The law dictates where the cattle are allowed to graze. They're all grass-fed outdoor cows. They're not allowed to eat in any fields that have been fertilized or applied with pesticides. You know that the milk that comes from these cows is as pure as it could be. It's like the milk was 800 years ago. It's not chemically altered in any way.

Rules for Parmigiano-Reggiano dictate that the cheese making process begin immediately within two hours of the cow being milked. You got fresh, pure, wholesome milk going into the cheese. The only other ingredients that can be used to make the cheese are salt and rennet, which is a digestive enzyme that makes the cheese curdle. That's in basically all cheese. You can't really make any cheese with fewer ingredients than Parmigiano-Reggiano. Then it's aged. It's tested, every single wheel, for quality before it's sold. It's just a wonderful cheese that guarantees the buyer of purity.

When we were rushing to put people into space during the '60s and NASA was testing foods to go up with the astronauts, they chose Parmigiano-Reggiano as the first cheese in space because it's so nutrient-dense and pure, and travels well.

JM: I've never really been a fan of Parmesan cheese. As I suspect, most of the people watching this are. But until I read your chapter on this, I actually became motivated and catalyzed to find one of the sources you identified as getting high-quality authentic Parmesan cheese and then try that. Because most of the cheese we're exposed to is fake. Here's what I want you to [expand on] because it's a terrific illustration of the inadequacy and the ineptitude of the FDA to regulate this because it's actually legal to sell fake Parmesan cheese. If you can expand on that because I think it's going to be eye-opening for almost everyone watching this.

LO: There are two very different problems with the Parmesan cheese in the United States. One is the pre-grated cheese, which is what a lot of people think of what they think of Parmesan. Take a cardboard tube and shake some cheese out of it onto your food. That cheese typically has added cellulose, which is a plant fiber. The media earlier this year kind of went wild calling it sawdust. It's not really wood but it's definitely not something that belongs in cheese. It's not naturally occurring.

It is added to that grated Parmesan cheese to keep it from clumping. It's an anti-clumping agent that's powdery and portable. Traditionally, the industry can add 2 to 4 percent cellulose to the cheese to achieve that. But because cellulose is cheaper than making cheese and the FDA does not have an upward limit, they decided that adding more would increase profit margins.

Earlier this year, Bloomberg and Inside Edition both did laboratory tests of supermarket grated Parmesan cheese and found that they far exceeded the FDA recommendations. "Recommendations" is FDA slang for what they'd like you to do but there's no actual rule preventing you from violating it. Some of these Parmesan cheeses had an excess of 20 percent cellulose. You're paying for cheese and you're getting plant fiber.

The bigger problem to me – and this isn't just Parmesan cheese, this is Gruyere and Manchego and a lot of the great European cheeses – is that we have almost no trademark protection in the United States allowed for what are known as geographically indicated foods. The best example of which would be champagne. These are foods that people associate with coming from a particular place. In the rest of the world, Parmesan cheese legally means this one cheese that can come from Parma, made in a certain way. But in the United States, you can call anything you want Parmesan cheese and it's legal. You can call anything you want Gruyere and it's legal.

Very few Americans realize that we produce a lot of champagne domestically that's labeled "champagne." People say to me all the time, "I thought champagne had to come from France." It should, but it doesn't in the United States. It's the same problem that got me started with the Kobe beef. It's legal for restaurants here to call anything they want Kobe beef. Americans see all these names and assume that they're getting these high-quality imported foods and they're simply not.

JM: It's eye-opening. I really greatly appreciate your investigations to expose this fraud and really give us a better solid base of information to make wise food choices. Because a big part of your book is not only exposing the fraud but also providing practical tips and recommendations, many of which you shared today. But there's far more. We've only just touched on a few. Three highlights, and there's probably dozens of different foods. I think the last chapter goes into a whole wide variety, even down to the honeys and things like that, that the average person just has no idea of what they're doing.

Since we all need to eat, I think this is a wise resource to put in your library and to read so that you're really informed and make wise choices and you're not deceived and manipulated by the food industry, which is a big industry. We're literally talking many billions of dollars. When you have industries as big that are really in bed with the revolving door with the federal regulatory agencies, the ability to enforce any types of labeling issues is minimized, if at all. It may be non-existent almost in the case of seafood industry. Any closing words or things you like to highlight or emphasize?

LO: Yeah. I would just say these fake, fraudulent, misleading adulterated foods are a 50 billion-dollar a year industry. That's just the bad stuff. The food industry as a whole is much bigger. This reaches into basically every sector of the supermarket, from honey and coffee and staples like juice, to the specialty foods like Kobe beef and wild Alaskan salmon.

But I don't want people to be scared to eat. Sometimes I do these interviews and everybody's shocked of some of the statistics. I want people to love their food, to eat delicious food that's also healthy for you. I devoted a lot of the book to that. That's why I give such specific tips so that the consumer could just be better armed. Information is certainly your best resource.

JM: Okay. Again, thank you for doing the hard work, the investigation, because this does not come easy. How long did it take you to write this book? It had to be a few years.

LO: When I started the research to the final draft, it was about four years.

JM: Yeah. Normally, some books can be written in under a year. That's uncommon but it can happen. But most books don't take much more than a year. It's very clear when you read a book that there was a lot of work invested in that book. I think it's like one of the best-value investments you can make. To literally get someone's hard work for four years for literally what? 20 dollars. It's crazy. I mean you're just – It's such a great investment to get and acquire that knowledge.

I mean even if you have to go to school, they're not going to teach you this in school to begin with, but if you did, you'd pay a lot more to learn in school. It's a tremendous bargain. I would really encourage everyone watching this. If you felt you've gotten some benefit from this interview, pick up a copy of *Real Food/Fake Food* by Larry Olmsted. I think you'll really enjoy it. I read about 100 to 150 books a year and it was one of the most enjoyable books I've read this year. It was very informing and actually entertaining. I really enjoyed reading the book and I think you will too.

[END]