

Transcript Details

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NHANES Database Reveals Skyrocketing Triglyceride Levels

According to a recent study of the US National Health and Nutrition Examination Survey Database, LDL-cholesterol levels are falling and triglycerides are skyrocketing. Joining me today is Dr. Jerome Cohen of St. Louis University, and he is here to discuss his analysis of the NHANES database and the implications of these results.

DR. LARRY KASKEL:

Dr. Cohen, Welcome back to the show.

DR. JEROME COHEN:

Thank you very much Larry, it is a pleasure to be with you.

DR. LARRY KASKEL:

Well, how about a little background on triglycerides?

DR. JEROME COHEN:

Yeah, you know triglycerides is sort of the poor cousin of lipids. We focus a lot on total cholesterol and the 2 major components LDL, which is the bad cholesterol and HDL, the good cholesterol, and people sort of ignore triglycerides. It really is something that should not be ignored and part of the reason is what I will talk about with regard to our survey and that is that it is associated with a high risk of coronary disease, especially in the context of low HDLs or metabolic syndrome and diabetes. So, it is something that we are going to pay more and more attention to.

DR. LARRY KASKEL:

Right, so what was your current objective to this study?

DR. JEROME COHEN:

Objective to see what was going on over the last 30 years. We went back to data from 1976(01:30) and we looked at data through 2006 and these were the NHANES data which is very valuable data set because it is a representative of population US sample and what we have is trends that we can look at over time with regard to the lipid fractions and that makes it valuable so that we can see what has been going on over the last 30 years and there is some good news and there is some bad news.

DR. LARRY KASKEL:

Lets go with the bad news first.

DR. JEROME COHEN:

Well the bad news is, as I think every listener will know that we are fattening up America and obesity is on the rise and the NHANES data clearly show that and as a result of that triglycerides have gone up and this has been an ignored lipid component, but now that we see obesity is emerging as an epidemic and we see diabetes and metabolic syndrome as its consequences it is associated with higher triglyceride levels. That is exactly what our data show. If we look at obesity levels in the NHANES survey back in the 70s, 53% of Americans were normal weight, 31% or 32% were overweight classified as a BMI between 25 to 30 and, only 15% were frankly obese classified as a BMI of over 30 and now in the most recent survey, 30 years later, the normal weight population has dropped to 30% from the 53% (03:00) figure. The obese population has gone up more than double from 15% to 33% or almost 34% and so this comes as no surprise to anyone, I think listening, as we look around shopping malls and airports and public gatherings, we see more and more obesity and this is driven we believe, the rise that we have seen in the triglyceride levels.

DR. LARRY KASKEL:

As you are talking about the dates, I can't help but think about the politician, Earl Budds, and in the early 1970s was when he kind of changed policy on farm subsidies and that is when corn became a part of everything and everybody's diet and high fructose corn syrup kind of leached its way into our life and now if you look at any food product, there is some sort of corn in there and that is turned into sugar in our bodies for whatever reason people don't realize that sugar gets stored as fat and raises triglycerides. Somehow, we have not been able to educate the population that your triglycerides are related to sugar intake and not fat intake.

DR. JEROME COHEN:

That is correct and I couldn't agree with you more. What we have observed is in fact that these obesity trends have gone up as you have indicated back over the last 30 years and it is basically a lifestyle problem, that is poor nutrition, over nutrition, and qualitative poor diets as well as(04:30) a reduction in physical activity and these 2 things coming together have created the obesity problem which in turn has led to the triglyceride problem that we will talk about, but the other thing that our data don't show, but others have in fact is that this extends back to youngsters and we are seeing obesity emerge more and more in younger children and in adolescents and teenagers and this is really a problem related again to nutrition and lack of exercise.

DR. LARRY KASKEL:

Well, some say that kids born today may live shorter lives than their parents.

DR. JEROME COHEN:

Right, yeah and I think that in fact is going to happen. The problem is an important one from public health point of view, but I think it has implications for all of us in the medical community. Practitioners and going beyond that to organizations and schools and we need to build better lifestyle changes into our everyday lives.

DR. LARRY KASKEL:

If you have just tuned in, you are listening to Lipid Luminations, on ReachMD XM 160, The Channel For Medical Professionals. I am Dr. Larry Kaskel and I am talking with Dr. Jerome Cohen of St. Louis University in Missouri and we are discussing the results of his analysis of the NHANES database and the implications of these results.

You are talking about lifestyle changes and everybody talks about lifestyle changes, but everybody doesn't know how to do it. I don't think doctors know how to do it. How can you give a structured course or some sort of help to doctors **(06:00)** to help their patients. I mean all we do now is that you know what, try a low-fat, low-cholesterol diet, and exercise for 3 months and come back and then we say okay, we did our TLC, now lets throw them on drugs. I don't think that is good medicine.

DR. JEROME COHEN:

No and that is the flip side of what our findings are, in fact, and it is very difficult to achieve these lifestyle changes. In fact, that is why we have done so poorly and as a result we are seeing this problem emerge more and more. If we don't do it well, people think about lifestyle changes is having to buy a pair of track shoes and go out and run when, in fact, we try to stress that you can build at physical activity in your everyday life and you can in fact try to improve both qualitatively the diets, lower and simple carbohydrates, and total fats and lower in sodium as well which is another associated problem with hypertension and I think we can do so much more than the good news stories of what I have said is and shows Americans can make lifestyle changes is smoking. We see far fewer smokers than we have ever seen in the population. It is almost down to 20% whereas it had been over 40% some 30 years ago. So, there is some health consciousness out there. The problem is that these other lifestyle changes are more difficult.

DR. LARRY KASKEL:

Well, but if we educate the masses that not only smoke, but sugar can potentially damage your arteries that sugar is also **(07:30)** a risk factor for not only diabetes, but heart disease and sugar means anything with an "ose" at the end not just raw sugar; glucose, fructose, maltose, dextrose, and that people need to start reading their labels.

DR. JEROME COHEN:

You are correct and I think this is associated with the higher triglycerides as you said earlier, the higher carbohydrate intake is one associated with higher levels of triglycerides.

DR. LARRY KASKEL:

It is amazing that if I restrict my patient's carbohydrate intake, not only will the triglycerides go to normal, but their blood pressure will go

to normal and they won't hold onto fluids anymore. It is so crazily remarkably easy to cure all these chronic diseases, yet we have such problems doing it.

DR. JEROME COHEN:

Right, well I will tell you a simple classic story about a patient I saw and I said "Mr. Smith, the best thing you can do is to eat a better diet which we went and outlined and to try and get a little more exercise or physical activity." He looked at me and says "I don't deserve the best, what is second best" and so he knew what second best was as did I which is to write a prescription for statin for this patient who has dyslipidemia.

DR. LARRY KASKEL:

It is a Band-Aid.

DR. JEROME COHEN:

Yeah, but let me tell you the good news side of the story which I mentioned earlier, there was good news and bad news. The bad news is we are getting fatter and triglycerides are going up and we are getting a more atherogenic lipid pattern. The good news side is that LDL-cholesterol has been coming down and it has come down **(09:00)** rather dramatically. Total cholesterol has fallen from 210 in 1976 era down to about 200 now. So, its fallen about 10 and for those who don't know the Healthy People 2010 Guidelines, has a goal to achieve cholesterol in the US population of 200 and so we have achieved that and largely because the LDL has come down, we have shown it to come down from 133 on average in 1976 era down to 118 in the 1999 to 2006 era. So, that is a very significant reduction we will have to say. Well, why is that in face of the fact that we are getting fatter and our triglycerides are going up and it is a very simple reason that I alluded to and that is people are taking statins and statins are wonderful drugs that work consistently when tolerated which is in most patients and thereby we see this dramatic fall particularly in the older population which is the group that is taking these statin drugs. So, these people are taking second best. They aren't following lifestyle recommendations, but they are popping a pill and feeling good about it when in fact their lipid pattern overall is not as good as the LDL or total cholesterol alone would suggest.

DR. LARRY KASKEL:

Are we enabling patients' behaviors giving the false illusion that by lowering your LDL that is sufficient.

DR. JEROME COHEN:

I think that the LDL goal of the ATP-3 guidelines **(10:30)** has been focused upon to the point where we have lost sight of these other lipids and we have written papers and given lectures called beyond LDL-cholesterol, that is we need to consider this metabolic component which generally is higher triglycerides, lower HDL associated with obesity, associated with diabetes, and it is really a deadly, deadly combination which will lead to problems even though people are taking statins.

DR. LARRY KASKEL:

Right statins are nice. They are necessary, but they are not sufficient and it is kind of like the patient who comes in who is depressed. I say, "Listen you can either go to therapy, you can either take this pill, the combination is far superior to one alone" and that is how I feel with drug therapy and lifestyle change. I think you need to do them both.

DR. JEROME COHEN:

Absolutely and one is not a substitute for the other and patients know that, but they find the lifestyle changes much more difficult, so they will pop a pill and I have patients tease me by saying "You know I have had this big dinner program and I had a horrible dinner and bad dessert and so I am just going to pop an extra statin." There may be some truth to what they are saying, but most of the time they are just kidding because they stay on the recommended dosage, but they see the statins as an excuse to carry on their old lifestyle changes and get away with it. When in fact, the bottom line is unfortunately they are not going to get away with it. It is going to catch up with them overtime. (12:00)

DR. LARRY KASKEL:

Now, in the statin family which one do you feel has the biggest impact on lowering triglycerides?

DR. JEROME COHEN:

The ones that we have looked at were super statin appears to lower triglycerides a little better than the other statins, but none of them are great in lowering triglycerides compared to their effects on LDL relatively speaking. And so if someone needs attention to high triglycerides aside from the statins and lifestyle changes, which we certainly would recommend first, the lifestyle one would want to consider fish oils which we use liberally in our practice, lowers triglycerides very well and it has very little in the way of side effects and that is a preferred drug and it can be bought over-the-counter at a relatively modest price. Niacin is another good way to lower triglycerides if tolerated and then finally the fibric acid derivatives such as fenofibrate and Gemfibrozil. So, there are a number of ways that we can pharmacologically reduce it when indicated. The lower level of normal has been set below the older level. The old level of upper limit of normal was 200, it has been reduced to 150 by the adult treatment panel on lipids and the reason Larry is because it captures people between 150 and 199 who are at greater risk, who should be paid attention to on the basis of that higher triglyceride level (13:30) and so these are people who need attention not necessarily pharmacologic intervention at that level, but certainly when you get the levels of the 250s and 300s and they can't lose weight and they have tried the diet, we may think of something in addition to the statins that will lower triglycerides to more optimal levels.

DR. LARRY KASKEL:

Dr. Cohen last question, if you were called up by President-Elect Obama and he said, "I need your advice in how to solve the healthcare crisis. What would you tell him to do? What could he do that can stop this epidemic from continuing.

DR. JEROME COHEN:

Well, I think first and foremost we start in schools with youngsters and we try to have good nutrition in the schools and the other is physical education activities which have been cut drastically and as far as adults are concerned, we find that incentives work and so if you can through lowering insurance encourage people to lose weight, encourage people to get physically active, and give them that incentive other than the medical incentive because people don't see that they haven't had a heart attack or stroke, they don't perceive that benefit necessarily.

DR. LARRY KASKEL:

On that note, Dr. Jerome Cohen of St. Louis University in Missouri thank you very much for coming back on the show.

DR. JEROME COHEN:

It has been my pleasure. Thank you for having me.

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