

# The Truth About Dietary Cholesterol | Dr. Peter Attia & Dr. Andrew Huberman

Most people are operating under the assumption that eating saturated fat is bad and you only do it in so far as you want to taste it Um And then of course there's a small group of people that uh love to eat organs and meats and and really pack cholesterol Um and would argue that it doesn't matter if your LDL is 870 Um It's not gonna impact your health What's the reality around LDL Uh HDL dietary cholesterol saturated fat uh at least in your view Uh So first let's differentiate between cholesterol and fat just for the listener Um because we use them So you know I don't want to make sure people understand So so cholesterol is a is a really complicated molecule So it's a ringed molecule Um God I used to know exactly what its structure was but like it could have 36 carbons for all I remember Um It is a lipid So it is a hydrophobic molecule that is synthesized by every cell in the human body Uh It is so important that without it uh if you look at sort of genetic uh conditions that impair cholesterol synthesis depending on their severity they can be fatal in utero So in other words anything that really interferes with our ability to produce cholesterol will uh is a threat to us as a species And the reason for that is cholesterol makes up the cell membrane of every cell in our body So you know as you know but maybe the listeners don't even though a cell is a spherical thing it has to be fluid right It's not just a rigid like sphere uh like a you know blow up ball right It's got to be able to kind of move in this way to mesh with other cells It also has to accommodate having porous structures that traverse its membrane to allow ions and things like that to go across And it's cholesterol that gives the fluidity to that membrane It's also as you're alluding to the backbone of some of the most important hormones in our body estrogen progesterone testosterone cortisol Um So we have this thing super important OK Then let's talk about those cholesterol Can you get cholesterol in your diet Yes you can eat foods that are rich in cholesterol what was known in 1960 but somehow escaped everybody's imagination until finally the American Heart Association acknowledged this a few years ago is that the cholesterol you eat does not really make it into your body And the reason for that is it's a terrified So we have and not to get too nerdy but I think people I think if I really think it's important people understand how this thing works So we have cells in our gut and aytes that they're the endothelial cells of our gut They have each one of them has basically two transporters on

them So the first is called the Niemann pick C one like one transporter The second is called the A TP binding cassette G five G eight OK The Nieman Pixie one like one transporter will bring in any sterol cholesterol Zoo sterol phytosterol any sterol that fits through the door will come in Virtually All of that is the cholesterol we produce that gets taken back to the liver that the liver packages in bile and secretes So that's that's what aids in our digestion which is another thing I should have mentioned earlier In addition to using cholesterol for cell membranes and hormones we wouldn't be able to digest our food without cholesterol because it's what makes up the bile salts So our own cholesterol is basically recirculated in a pool throughout our body And this is the way it gets back into the body It's through this Nieman Pixie one like one transporter When it gets in there the body this is the checkpoint of regulation This is where the body says do you have enough cholesterol in the body Yes or no If yes I will let that cholesterol make its way into the circulation So it'll go off the basal lateral side of the cell not the Luminal side into the body Alternatively the body says you know what we have enough cholesterol I'm gonna let you poop this out And now the A TP binding cassette will shoot it out It'll go back into the Luminal side and away It goes the c so all of the cholesterol in our body is not as terrified and it doesn't have that big bulky side chain attached to it The cholesterol you eat is esterified and a ster cholesterol molecule simply can't physically pass through that Nieman Pixie one like one transporter Now we probably manage to destery 10 to 15% of our dietary cholesterol So in other words there are small amounts of dietary cholesterol that do make their way into our circulation but it represents a small fraction of our total body's pool of cholesterol Again this was known even by Ansel Keyes the the the guy who turned fat into the biggest boogeyman of all time Ansel Keyes acknowledged this in the 19 sixties dietary cholesterol plays no role in serum cholesterol Again it took the American Heart Association another 60 years to figure that out But even now they acknowledge that dietary cholesterol has no bearing So why is it that it's pretty easy to find studies or at least people with who are highly credentialed from good institutions claiming that eating saturated fat that's different saturated fat and red meat things that are rich in cholesterol to be more specific is bad for us in terms of eventual LDL So this is two different things So saturated fat consumption in many people will raise LDL cholesterol So it's important to differentiate between the what what is saturated fat So saturated fat of course is a fatty acid just so people understand totally different molecule from cholesterol Cholesterol is very

complicated ring structure multiple rings stuck together S fa saturated fat is just a long chain fatty acid that is fully saturated meaning it has no double bonds and it can exist in isolation It can exist in a triglyceride triacylglyceride or you know phospholipid or all sorts of things like that So when we eat foods that contain fat basically there are three distinctions for that fat Is it saturated Is it monounsaturated one double bond or is it polyunsaturated two or more double bonds The observation that eating saturated fat raises cholesterol is generally correct