

# Omega 3: Why is it that bendy is trendy?

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*Source:* <http://sci.tech-archive.net/Archive/sci.med.nutrition/2008-01/msg00291.html>

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  - *Date:* Wed, 30 Jan 2008 13:43:25 -0800 (PST)
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Hi,

Why is it that Omega 3 fats makes good cholesterol? From what I've read about its chemistry, it shouldn't. Could you read the assumptions I've made, and see where my logic is wrong?

1) OMEGA 3 IS BENDY: Omega 3 fats are called Omega 3 because they have a double join in their carbon chain every three carbon atoms. Due to the electrical properties of atoms, this makes the chain bend every three atoms. So if you looked at one under a super-powerful microscope, Omega 3 fat molecules looks like a W. In contrast, normal saturated fats don't have any double bonds, so they are straight like a stick ---- .

2) OMEGA 3 IS LIQUID: If you imagine a whole bunch of straight sticks in a box, they pack down nicely, so you can fit more in to a given area. In the same way, saturated fats pack down nice and tight because the molecules are straight, so you end up with a solid, like butter or animal fat. On the other hand, Omega 3 is all bendy, so is hopeless at packing down tight. Therefore, they take up more room, and you get less molecules for the same amount of space. That's why Omega 3 fats end up as liquids.

3) GOOD CHOLESTEROL IS DENSE: Omega 3 acids make "good cholesterol". One reason your body makes cholesterol in the first place is because to patch up dents in your arteries, caused by blood flow wearing away the insides. "Good cholesterol" is considered good because it is tightly packed, and solid, and therefore fills the gap like putty. On the other hand "bad cholesterol" is big and fluffy, not at all dense, and doesn't patch the holes up properly. What's more, it tends to get washed off the hole later on, and sits around in the blood stream forming clots.

AND YET – they say that polyunsaturated fats like Omega 3 makes the good, dense cholesterol, while saturated fats make the bad fluffy cholesterol. How can it when it's so hopelessly bendy?

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