Biotin: The Forgotten Vitamin
By Hamid M. Said

Biotin is an essential micronutrient for all mammals and is a member of the B complex group of vitamins. Biotin was discovered in nutritional experiments that revealed a factor in many foodstuffs that was capable of curing the scaly dermatitis, hair loss, and neurologic signs induced in rats fed dried egg whites.

Avidin is a glycoprotein found in egg whites and binds biotin very specifically and tightly. From an evolutionary standpoint, avidin probably serves as an antibacterial in egg whites because it is resistant to a broad range of bacterial proteases in both the free and biotin-bound forms.

Because it is resistant to digestive enzymes from the pancreas, dietary avidin binds to dietary biotin and prevents its absorption. The normal bacteria of the large intestine synthesize biotin. Cooking changes avidin and makes it susceptible to digestion and unable to interfere with the intestinal absorption of biotin.

The fact that we have a requirement for biotin has been most clearly shown in 2 situations that result in biotin deficiency:

Prolonged consumption of raw egg whites and IV nutrition without biotin supplementation in patients with short-gut syndrome

Interestingly, the biotin requirements for normal persons and for persons in special clinical circumstances are not known. Safe and adequate doses have been suggested.

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DR. MERCOLA’S COMMENT:

I recommend raw egg yolks because they have dramatically improved my own health.

When one heats the yolk, changes occur in the fragile elements that serve to support the vital life force within the egg. The egg yolk, in many ways, is not very different from your own cells. Once your temperature goes above 105 degrees you will start to suffer serious health problems. Similarly, heating the yolk above 105 degrees will also start to cause structural changes in many of the highly perishable components present in the yolk.

The most obvious one is cholesterol. The higher the yolk is heated, the more likely oxidation of cholesterol will occur. This is especially true when it is combined with egg white (as in scrambled eggs) because the iron present in the white will further oxidize the cholesterol. Our blood vessels do not have receptors for cholesterol, only for oxidized cholesterol. So, you can eat as many eggs as you like, without worrying about cholesterol, as long as you don't cook the yolks.

Ideally you will want to secure eggs from chickens that were given additional sources of omega-3. The best source would be from flax seeds. Although many are concerned with salmonella infections, it seems to be less of an issue if the eggs are organic and raised properly. Even if one acquires a salmonella infection, they are usually not serious, typically self-limiting and easily treated with good bacteria.

The key to using raw eggs is to make sure you cook the whites. If you fail to cook the whites you will eventually develop a severe biotin deficiency that can result in serious neurologic consequences.