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Niacin: The facts on flushing

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The BC Drug & Poison Information Centre commonly receives calls from patients who are experiencing an adverse reaction to over-the-counter niacin. Typically patients are taking the drug for the first time in higher doses for hypercholesterolemia or other indications. Usually, they are quite concerned about an "allergic" reaction to the vitamin. Here are some commonly asked questions and answers about flushing from niacin:

Q: I recently started taking niacin for high cholesterol. The first time I took it I experienced a hot flushing sensation on my skin that took an hour to go away. I thought I was having an allergic reaction. Can you tell me what happened?

Niacin (nicotinic acid vitamin), or vitamin B₃, is an essential vitamin. Adults require a daily dietary intake of about 15 mg. At much higher doses (1000 to 2000 mg per day) niacin is used as a treatment for high cholesterol.

These higher doses of niacin cause an intense flushing or "prickly heat" sensation to the face and upper body, usually 15-30 minutes after taking a relatively large dose (e.g. 500 mg). This flushing is experienced by almost everyone and, while it might feel like an allergy, it is not a true allergic reaction.

Other than causing discomfort the flushing is harmless and usually subsides within 1 or 2 hours. Symptoms are most intense after the first dose and typically diminish over days or weeks with continued use of niacin.

Q: Are there different types of niacin that might reduce the flushing?

The flushing occurs with over-the-counter immediate-release niacin tablets. With this type of niacin the vitamin is delivered to the body in a short burst and the flushing reaction is more intense.

Sustained-release niacin tablets deliver the vitamin to the body in a slower fashion over many hours. This reduces the intensity of the flushing but this type of niacin causes liver damage in some people.

A prescription extended-release niacin product called Niaspan® releases niacin in a slower way but over a shorter period of time compared to the sustained-release tablets. This gives the liver a "break" from processing the niacin making liver damage less likely. This type of niacin has been shown to have positive effects on cholesterol with reduced flushing. However, it is more expensive than regular niacin tablets.

Q: What about "no-flush" niacin?

No-flush niacin contains something called inositol nicotinate, which the body is supposed to slowly convert to niacin. However, there is evidence that it does not actually provide the body with much niacin. This is probably the reason it does not produce any flushing. Of course, this also means that no-flush niacin does not have any of the beneficial effects on cholesterol.

Q: If I continue to take the regular niacin tablets, are there any tips to minimize the flushing?

The key to reducing the intensity of niacin flushing is to start with a low dose and gradually increase the dose over a period of weeks. Taking it with food also helps reduce the intensity of the reaction.

One approach is to start immediate-release niacin at 100 mg twice daily after a meal for the first week, then double the daily dose each week until you are taking what the doctor has prescribed.

Aspirin will also help to reduce the flushing. If you are already taking low-dose aspirin (81 to 325 mg daily) try taking it about 30 minutes before your first niacin dose of the day.

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by Rob Gair, BSc (Pharm), CSPI

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