

Niacin (Vitamin B3) Part 2: Implementation

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In Niacin Part 1, the history and benefits of niacin were reviewed, as well as the amazing contributions made by Abram Hoffer MD PhD (1917 - 2009). In this article we will review some details about niacin's forms and how to use it.

The Names and Forms of Niacin

In nature, many vitamins exist in families with several forms including Vitamins A, D, E and B12. Niacin has two natural forms, niacin and niacinamide (see table). Their chemical names, "nicotinic acid" and "nicotinamide", respectfully, are only used by chemists because they sound like "nicotine." However, nicotine and niacins are related, which is why niacins can help several addictions.

There are several man-made slow-release forms, which are "flush-free". They are more expensive, and can cause liver abnormalities; in most cases the natural forms are safer, cheaper and more effective.

The Niacin Flush ("NF")

The NF, while inconvenient and sometimes scary is rarely dangerous. It can look like: bright red skin anywhere on the body; a feeling of heat/sunburn/ hot flash; "allergy" symptoms such as hives, stuffed nose, swelling of eyelids; or prickly sensation in skin which may feel painful. It can last seconds to minutes, rarely lasting 30 minutes or more.

The NF often is caused by a release of histamine, so an intense flush implies a build-up of histamine, usually in chronic allergy. Hoffer used niacin to help with allergy and anaphylaxis. Since the NF can look like a hot flash, it implies that histamine may involved in this symptom. Some people like the NF--those with cold extremities, Raynauds, and other conditions intentionally skip doses to cause the flush to recur.

The NF can be avoided by taking niacinamide instead, but certain benefits, such as for cholesterol (lipids), energy and other conditions may require the flush form (see table).

The NF can be mitigated by: 1) starting with low, frequent doses to slowly release the histamine; 2) taking with food; 3) not with hot liquids, 4) not with alcohol, 5) a consistent schedule (not skipping doses), 6) consistent fluid intake (urine not dark), 7) high dose vitamin C (as high as 2000-5000 mg 4x/day, to bowel tolerance), 8) and in special cases, taking it with histamine-blocking agents.

Tryptophan, Serotonin, Melatonin and Niacin

Tryptophan is an essential amino acid commonly associated with turkey and sleepiness. Tryptophan is ultimately made into serotonin, and then melatonin, which can explain its sedating qualities. Tryptophan also goes down a different path to make niacin. Along that pathway, certain compounds are made that are involved in viral and yeast infections, and so tryptophan may be hijacked in such conditions, causing a deficiency of niacin (see Part 1). Niacinamide's path is partly different than niacin, which is

the basis for their different effects.

NAD and NADP

These two compounds are a critical part of the energy currency of every cell in our body as well as those of bacteria and yeasts. The "N" in each of these compounds comes from Niacin. Therefore, when supplies are limited, there is fierce competition for this resource. With insufficient NAD/ NADP, the functions of our cells are compromised--this includes brain, immune, hormone, growth, repair and essentially every other cellular function.

Dosing of Niacin

The RDA of niacin for an adult is 14 mg, established in the 1950's to avoid the deficiency disease pellagra. Like Vitamin D, recent science has shown that optimal health requires levels far greater than these minimal amounts. Hoffer advocated doses as high as 3000 mg or more. While most of us can easily take 25-50 mg/day, choosing between niacin and niacinamide, ramping and monitoring levels requires an individual approach and an experienced practitioner.

Future of Niacin

Hoffer showed that the number of negative articles about a supplement such as niacin is proportional to the number of ads for pharmaceuticals in the same media. It also takes 20-50 years for an idea to move from science to mainstream. The value of niacin was recognized by greats such as Linus Pauling and Hoffer in the 1960's, so hopefully it's time is coming. The growing epidemic of mental disorders and metabolic diseases including depression, anxiety, autism, ADD, obesity, diabetes and heart disease will ultimately require the incorporation of niacins into a world-wide strategy due to their efficacy and essentiality. Until then, only the minority will seek out, utilize and benefit from this core nutrient.

IMPORTANT NOTES:

1. **This educational material may not be used to influence medical care without supervision by a licensed practitioner.**
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3. Dr. Cheikin's website has related articles and references such as "Niacin Part 1", "Seeing the Obvious" and others.

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Niacin Forms and Features				
Feature	Flush	"Flush-Free"		
		Natural		Man-Made
Source	Niacin	Niacinamide	Inositol Hexanicinate	Slow Release Niacins
Form	Niacin	Niacinamide	Inositol Hexanicinate	Slow Release Niacins
Alternative Name	Nicotonic Acid	Nicotinamide	---	
Flush	Yes	Rare	No	No
Abnormal Blood Tests	Occasional	Rare	Rare	Yes
Lipid Lowering	Yes	No	Yes	Yes
Cost	\$	\$	\$\$	\$\$\$
Joints Benefit	Yes	Yes	Yes	Yes
Brain Benefit	Yes	Yes	Yes	Yes
Allergy Benefit	Yes	Some	Some	Some