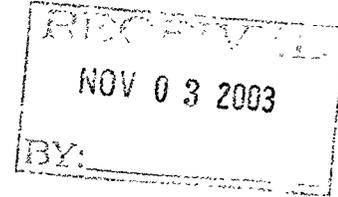




FINE QUALITY NUTRIENTS

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October 27, 2003

Dr. Susan J. Walker
Food and Drug Administration
Attn: Mail Code HFS-810
5100 Paint Branch Parkway
College Park, Maryland 20740

Dear Dr. Walker:

This letter is in response to your letter of October 17, 2003 that points out our indirect claim of disease treatment with our "Joint-EZ, 'Glucosamine-Free' Joint support" product.

Our remedy to this is to remove references where Glucosamine is purported as a treatment for arthritis. The complete text of our revised structure / function claims is found below.

Due to a printer error, none of this information has yet been distributed, so, in this case, we can resolve this issue without delay.

Sincerely,

Pat Hallman NMD
President Lidtke Technologies

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(text of claim on the product label) "Joint-EZ, 'Glucosamine-Free' Joint Support

(text of claim on the product information sheet) "Joint-EZ[®] – Help Your Joints, Without Hurting Your Health

By Dr. Pat Hallman N.M.D.

Glucosamine-free products are sometimes recommended for individuals with Yeast Overgrowth, Glucose Intolerance, Weight, or Allergy conditions.

How Can Joint-EZ[®] Help?

Joint-EZ[®] goes beyond supporting the accelerated rebuilding of smooth cartilage and targets your entire connective-tissue system of bone, ligaments and tendons that is necessary to properly convey the mechanical forces exerted by your muscles. Together, the ingredients support the integrity of surrounding tissue, and reduce complications that interfere with healing.

What Have We Learned about Glucosamine?

Illnesses that are either doctor-induced or self-induced are increasing yearly in the United States, with over 1 million cases being reported annually. Not all are the result of negligence, however. Some result from the best of intentions. Take, for example, the use of glucosamine for the relief of joint dysfunction. Early research indicated that certain forms of orally-ingested glucosamine, in combination with chondroitin sulfate, could improve the structure and function of your joints. Bestselling books have been written on this subject. More recently, however, research has confirmed both clinical and anecdotal reports that glucosamine can exacerbate a variety of illnesses. Furthermore, a meta-analysis published in the Journal of the American Medical Association found "large" benefits for chondroitin sulfate but only "moderate" effects for glucosamine.

But Isn't Glucosamine a Component of Connective Tissue?

Glucosamine is a simple amino-sugar made in your cells from fructose 6-phosphate and L-glutamine. Glucosamine is then used as a building block for more complex glycosaminoglycans, including chondroitin sulfate. As such, free glucosamine is not normally found outside the cell. The glucosamine made within your cells is typically sequestered away from the areas where yeast and fungi infect, and its production is tightly monitored and controlled within your cells. In this manner, the glucosamine manufactured by your body follows a far different path from the glucosamine that is taken orally.

Orally ingested glucosamine passes through your digestive tract and into your bloodstream. The yeast that inhabit your digestive tract then feed on glucosamine and incorporate glucosamine into their cell walls. Thus, glucosamine provides yeast with a

source of energy as well as the building blocks for overgrowth and a flare-up of symptoms.

Glucosamine and Insulin Resistance

Your body naturally produces glucosamine by way of a sequence of reactions called the hexosamine pathway. This pathway contains a rate-limiting step that controls the intracellular production of glucosamine. Glucosamine that is taken orally, though, enters this pathway downstream of the rate-limiting step, thereby sidestepping cellular controls and flooding your hexosamine pathway. Studies published in both the *Journal of Biological Chemistry* and *Diabetes* demonstrate that glucosamine administered in this way can rapidly lower ATP levels and mimic the insulin resistance brought on by elevated levels of glucose and insulin.

Glucosamine Supplements

Although high blood glucose and high insulin levels are known to cause insulin resistance in both skeletal muscle and fat, it is interesting to note that glucose and insulin alone are not enough to produce this effect. They can only produce insulin resistance in the presence of L-Glutamine, a precursor of glucosamine. For this reason, the amino-sugar, glucosamine, is more toxic than the simple combination of glucose and insulin.

Glucosamine supplements are a more serious concern, however, according to the findings of Marshall et al., in that exogenous (administered) glucosamine is forty times more toxic to fat cells than the glucosamine that is produced through your cell's natural hexosamine pathway. Unfortunately, seniors who are overweight and most prone to insulin resistance are often the most likely to be using Glucosamine in an effort to maintain healthy joints.

Use Joint-EZ to Strengthen Joints and Keep Your Good Health

Order Joint-EZ from Lidtke Technologies and you will receive advanced therapy for joint health, without the damaging effects of glucosamine. If you have a question, Call Lidtke Technologies. We'll put you in touch with a knowledgeable physician who can answer them.

(text of claim on the product advertisement) "It makes you feel like dancing!"

Joint-EZ

From the people who care enough to do it right!

Joint-EZ is the glucosamine-free answer to good health for your joints. Glucosamine aggravates candida, increases insulin resistance and only provides "moderate" benefits according to research in the *Journal of the American Medical Association (JAMA)*, you'll find none of it in Joint-EZ.

Joint-EZ:

- Provides “large” benefits, per JAMA
- Strengthens bone, ligaments & tendons
- Speeds smooth cartilage rebuilding
- Supports integrity of surrounding tissue”

Joint-EZ (name of supplement)

Lidtko Technologies Corp. (brand name)