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PHARMA & HEALTHCARE 11/07/2013 @ 7:39PM | 4,870 views

Study: Herbal Supplements Full Of Contaminants, Substitutes, And Fillers

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As I [once noted](#), when it comes to pharmaceuticals, thanks to testing and regulatory requirements, “when you get such a medication, you generally know what you’re getting.” Turns out, when you toss back a handful of herbal supplements, you could be swallowing anything from plain old rice to weeds that give you gas, according to a [recent study](#) examining the contents of some products. In summarizing the results, the New York Times [used the headline](#), “Herbal supplements are often not what they seem.” That’s putting it mildly, unless you consider rice as simply not quite seeming like St. John’s Wort, a concoction that’s supposed to ameliorate depression.



Photo credit: erix!

Indeed, the study authors found that of the 12 companies whose 44 products were included in the study, only two had no products with contaminants, substitutions, or ingredients not listed on the label. Using terms like “contamination” and “fillers,” the researchers make clear that herbal supplements at their most harmless might contain nothing but rice but at their worst contain unlisted ingredients, such as nuts and plants, that can cause mild to severe reactions. For example, they identified black walnut contamination in a ginkgo product and contamination of many products with *Parthenium hysterophorus* L., or Santa Maria feverfew. This particular plant can trigger respiratory and skin reactions in people.

Other unlisted fillers that might end up in unwitting consumers include allergenic plants like soy and wheat. Surprise!

This study doesn’t represent the first time the supplements industry, which [goes largely unregulated](#) in the [United States](#), has been called out for contents. Almost a decade ago, experts [were talking about](#) how these supplements often contained “just a fraction of the ingredient on their labels—if any at all,” along with pesticide and heavy metal contamination. Just this year, news emerged that dietary supplements are tops in drug recalls for containing ingredients that pose a risk of [severe adverse health consequences or death](#). One of the USA’s most prominent pediatric hospitals, Children’s Hospital of Philadelphia, [banned the sale](#) of supplements in its pharmacy in October over concerns that the pills and potions hit the shelves without being regulated. And just emerging from a [scientific conference this week](#) are reports that liver damage from supplements is on the rise.

For a full list of what the researchers, based at the University of Guelph, Canada, tested, you can take a look at their [table here](#). It shows what each sample said on the tin and what they really found inside, based on a technique using DNA “bar codes” to identify each compound present and trace it to the species of origin. Every place you see an “a” or a “b” added after a term indicates that the authors found either a contaminant, substitute, or filler that was not disclosed to consumers.

Naturally, the industry is unhappy. In a [statement](#), the American Botanical Council calls for the paper to be retracted, rewritten, and re-peer-reviewed. In the language of a bygone age, they have provided a list of critiques of the study [here](#) in their “HerbalGram.” I’ll leave it to the fair reader to make determinations about their incisiveness and genuine relevance to the overall findings

(Example: They criticize the paper authors for misnaming a plant and then suggest that the authors might have meant *another contaminant* known as an “adulterant or unintentional substitute ... for more than 100 years”; um ... isn't that still a contaminant?). But the writers of the industry critique then note that:

“ ... we are sensitive to the possibility that some manufacturers may add various unlabeled, low-cost, and possibly inert fillers to herbal products to lower their costs — thereby possibly producing a product of questionable activity and benefit —.

And that's one thing that greater regulation and standardization might control. But the industry has strenuously fought such regulation, as Paul Offit chronicled [in his book](#) *Do You Believe in Magic?*. After all, \$34 billion a year makes for a lot of (pocket) filler worth protecting.