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## Aluminum is Toxic to All Life Forms: So Why is it Used in Vaccines?

Posted By Admin On March 10, 2015 @ 7:00 am In [Headline,News,Videos](#) | [9 Comments](#)

 The Children's Hospital  
of Philadelphia®

 VACCINE EDUCATION CENTER

### Aluminum and pregnancy

*"Aluminum is considered to be **an essential metal** with quantities fluctuating naturally during normal cellular activity. It is found in all tissues and is **also believed to play an important role in the development of a healthy fetus.**"*



**Reviewed by:** Paul A. Offit, MD  
**Date:** April 2013

Slide from Dr. Humphries lecture. Source: Dr. Paul Offit's website, Children's Hospital, University of Pennsylvania, Vaccine Education Center, April 2013. Is Dr. Offit correct?

#### Health Impact News

Dr. Suzanne Humphries has made available to the public her lecture on neonatal immunity presented in New Zealand in May of 2014. It is a segment of a larger lecture series covering what she calls the "three year pregnancy" which covers gestation and the first 2 years of extra-uterine life. ([Full lecture series here](#) <sup>[1]</sup>.)

In the lecture that can be viewed in the video below, Dr. Humphries begins by discussing the impact of injecting animal DNA, matter, and cells via vaccines.

## What about vaccines and the epigenome?



- ❖ Made on animal tissue  
Dog/monkey kidneys,  
lung, caterpillars, pig  
stomach, chick embryo  
eg.
- ❖ Animal blood
- ❖ Animal albumin

Dr. Humphries: Vaccines contain substrates from all of these animals (including fetal human tissue), and this fact is not even controversial.

The long-term effects of injecting animal and human DNA material into children via vaccines have not been studied, particularly in combination with so many vaccines in the childhood vaccination schedule today, which has greatly increased over the past several years.

### Aluminum and Pregnancy

Dr. Humphries starts the section on aluminum and pregnancy with a quote from Dr. Paul Offit's website, Children's Hospital, University of Pennsylvania, Vaccine Education Center, April 2013:

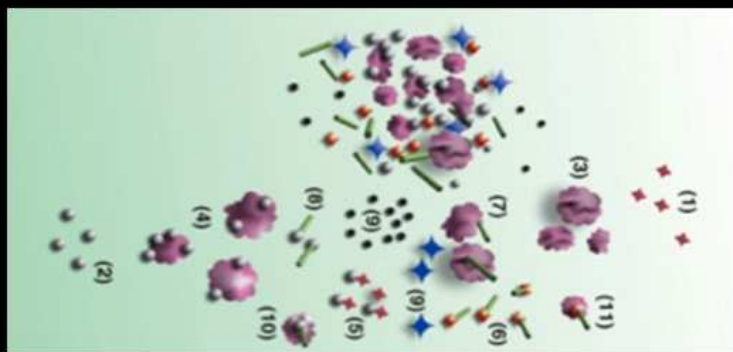
"Aluminum is considered to be **an essential metal** with quantities fluctuating naturally during normal cellular activity. It is found in all tissues and is **also believed to play an important role in the development of a healthy fetus.**"

Dr. Humphries states that when this statement was published on Dr. Offit's website, a website specifically setup to "educate" professionals and others regarding vaccines, she sent a copy of this statement to "one of the world's most knowledgeable aluminum experts" who is usually very diplomatic and polite, and he replied with a very "unflattering statement" about Dr. Offit's comment regarding aluminum.

Dr. Humphries then asks how someone supposedly as intelligent and educated as Dr. Offit could make such a statement, particularly after reading very well-known research and statements regarding aluminum, such as this one by Dr. Kawahara:

**“WHILST BEING ENVIRONMENTALLY ABUNDANT, ALUMINUM IS NOT ESSENTIAL FOR LIFE. ON THE CONTRARY, ALUMINUM IS A WIDELY RECOGNIZED NEUROTOXIN THAT INHIBITS MORE THAN 200 BIOLOGICALLY IMPORTANT FUNCTIONS AND CAUSES VARIOUS ADVERSE EFFECTS IN PLANTS, ANIMALS, AND HUMANS.”**

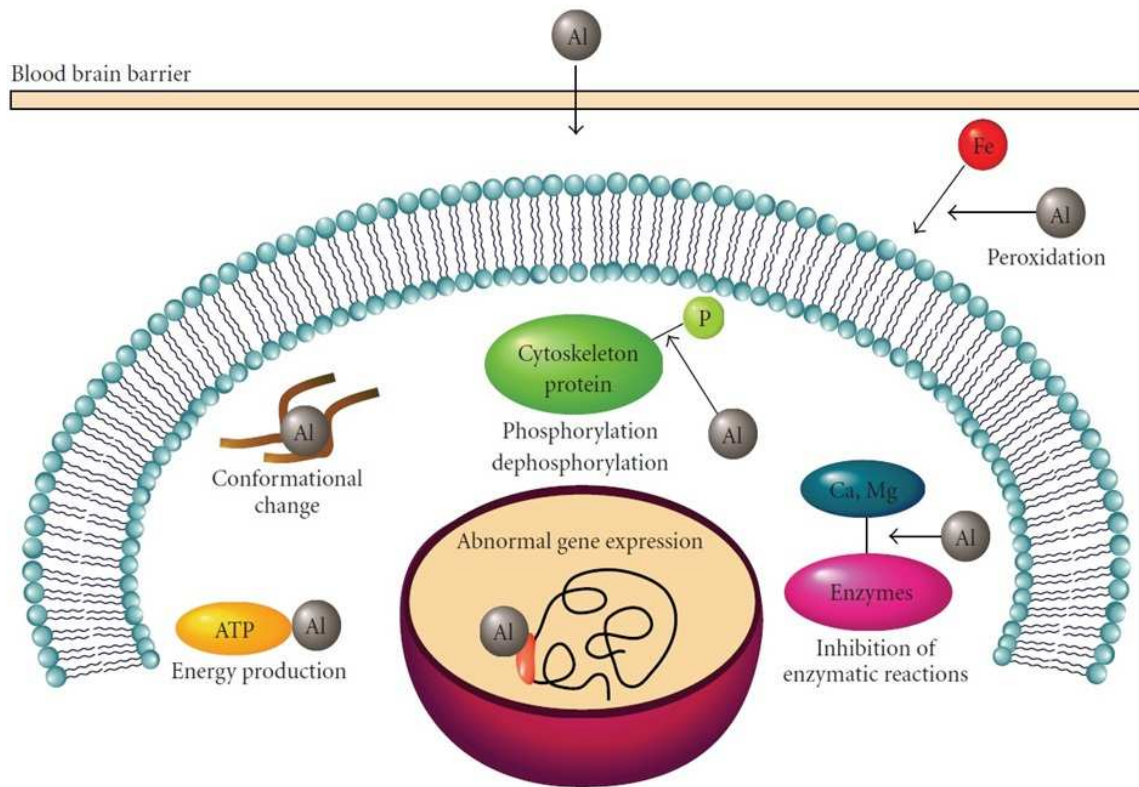
KAWAHARA 2011 PMID: 21423554



Link between Aluminum and the Pathogenesis of Alzheimer's Disease: The Integration of the Aluminum and Amyloid Cascade Hypotheses – [Int J Alzheimers Dis. 2011; 2011: 276393](#) [2].

Dr. Kawahara's [research on aluminum](#) [2] and its neurotoxic effect is discussed by Dr. Humphries, in regards to pregnancy. Dr. Kawahara's article is supported with 176 references in the medical literature: aluminum is a death factor for cells.

It should be noted that Dr. Offit holds a patent on one of the vaccines in the childhood vaccine schedule, and earns royalties from the sale of that vaccine.



[3]

Link between Aluminum and the Pathogenesis of Alzheimer's Disease: The Integration of the Aluminum and Amyloid Cascade Hypotheses – [Int J Alzheimers Dis. 2011; 2011: 276393](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3121111/) [2].

### Aluminum Damages Cells

Next, Dr. Humphries discusses the oxidative damage done to cell by aluminum, highlighting the research of [Dr. Verstraeten](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1451111/) [4].

## Aluminum damages cell membranes and myelin.

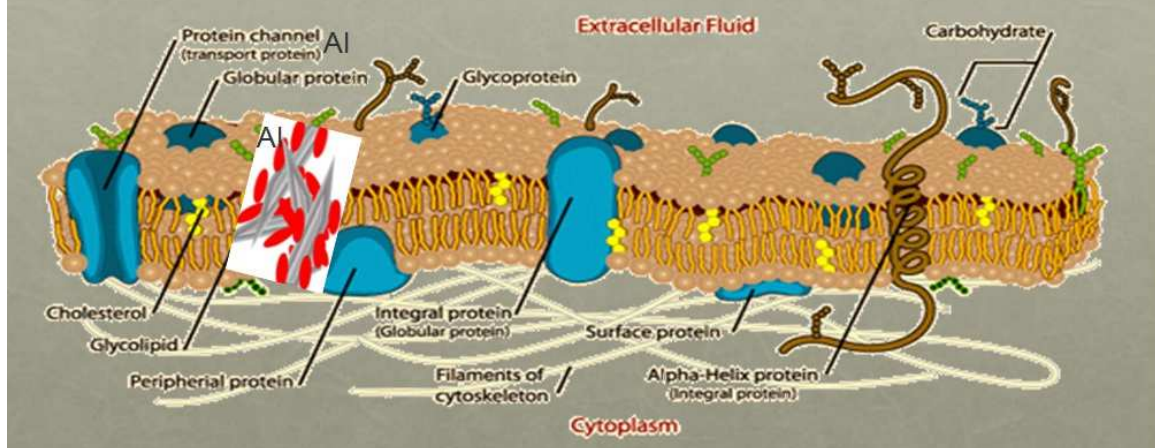
Verstraeten1997. PMID 9264541

**Membrane properties**

Causes the change the lipid/phospholipids profiles of myelin *in vivo*.

Induces the change in membrane physical properties (surface potential, lipid fluidity, and lipid arrangement).

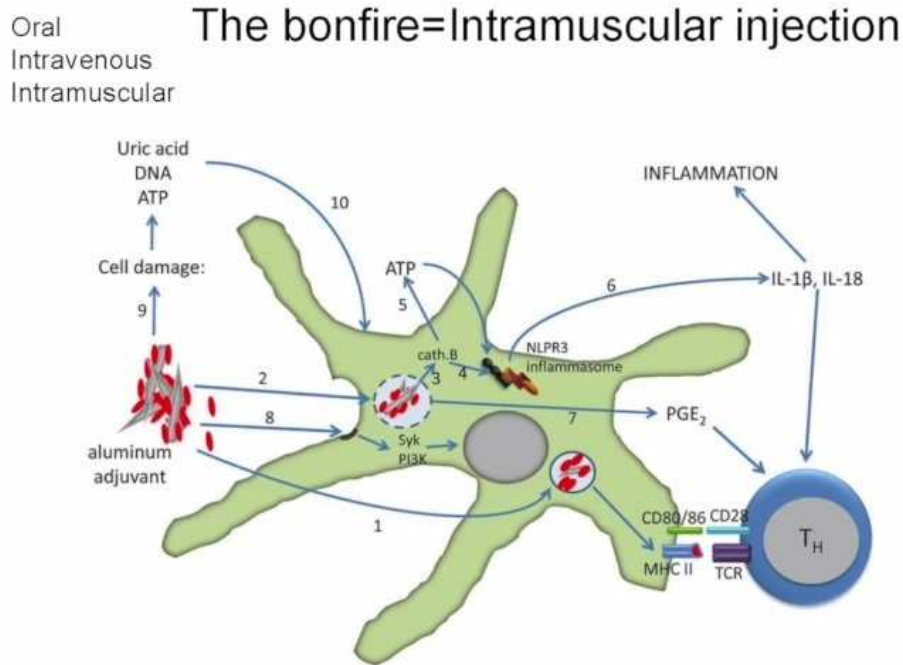
Induces the change of membrane fluidity.



Myelin is a preferential target of aluminum-mediated oxidative damage. Verstraeten SV – [Arch Biochem Biophys. 1997 Aug 15](http://archbiochembiophys.com/2015/aluminum-is-toxic-to-all-life-forms-so-w...) [4]

## Injecting versus Ingesting Aluminum

The difference between ingesting aluminum versus having it injected via a needle containing vaccines is elaborated on by Dr. Humphries. One of the common arguments proposed by pro-vaccine advocates is that we are already exposed to toxic elements like aluminum or mercury which are prevalent in our environment and in our foods at much higher levels than what are contained in vaccines. But there is a huge difference between oral ingestion of aluminum, and injecting it directly into the body.

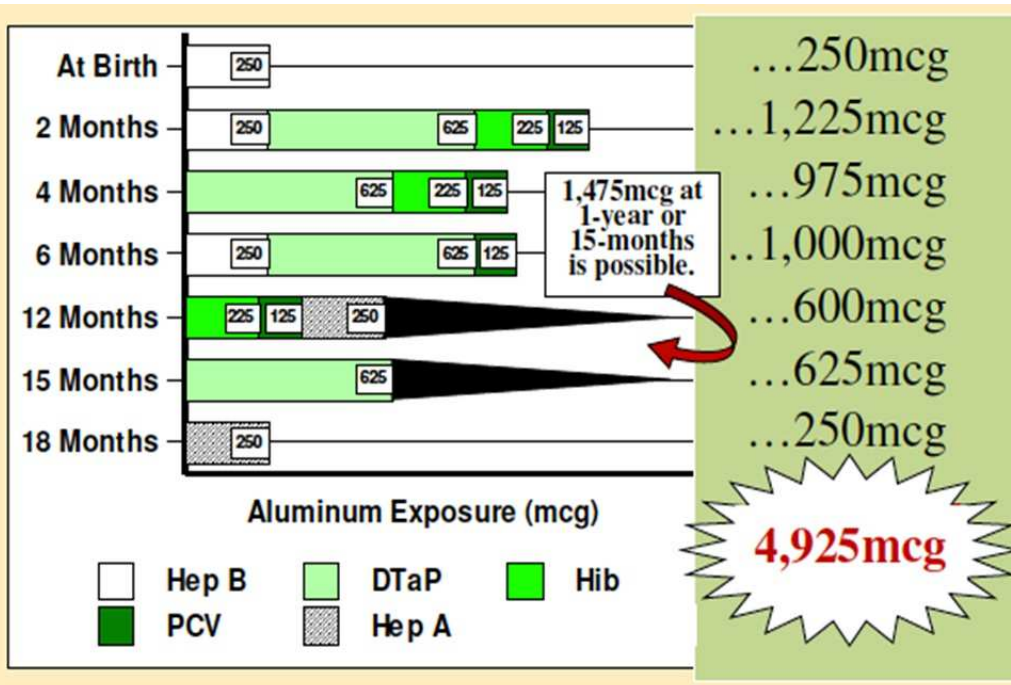


Mechanism of immunopotentialiation and safety of aluminum adjuvants. Hogenesch – [Front Immunol. 2013 Jan 10;3:406](http://frontimmunol.com/2013/jan/10/3/406) [5].

Dr. Humphries explains that when you eat aluminum, you absorb between 0.2% and 1.5%. If you have healthy normal-functioning kidneys, it will be excreted (Dr. Humphries is a nephrologist.)

When you inject aluminum intramuscular, however, you absorb 100% of it.

Aluminum is presumed to be safe, according to Dr. Humphries, simply because it has been in our food and in vaccines for so many years. However, it has never been tested against a placebo to be safe. She shows the cumulative effects of aluminum from vaccines in the first 18 months of a child's life, beginning at birth:



### Aluminum and Kidney Function

One thing that is never considered when discussing aluminum ingestion, whether oral or intramuscular, is the kidney function of the individual. As a practicing nephrologist (kidney doctor), Dr. Humphries states that when giving kidney dialysis, everything is done to be sure that aluminum is not entering into the kidneys because the harmful effects of aluminum on those with kidney related illness is very well known.

Besides those with damaged kidneys, infants also have low kidney function early in life:

## Kidney Function of Infants

- Al is NOT rapidly removed from muscle and then taken in blood to the kidneys for excretion
- Infant kidney function is not at adult levels

AGE	AVERAGE GFR ML/MIN/1.73 M <sup>2</sup>	RANGE ML/MIN/1.73 M <sup>2</sup>
2-8 days	39	17-60
4-28 days	47	26-68
37-95 days	58	30-86
1-6 months	77	39-114
6-12 months	103	49-157
12-19 months	127	62-191
2-12 years	127	89-165

Heilbron 1991. PMID: 2025537

Expressing glomerular filtration rate in children. Heilbron - [Pediatr Nephrol. 1991 Jan;5\(1\):5-11.](#) [6]

### Aluminum as a Neurotoxin Affecting the Brain

A [recent study](#) [7] conducted in 2013 concluded:

Alum has high neurotoxic potential, and planning administration of continuously escalating doses of this poorly biodegradable adjuvant in the population **should be carefully evaluated by regulatory agencies** since the compound may be insidiously unsafe. It is likely that good tolerance to alum may be challenged by a variety of factors including **overimmunization, Blood**

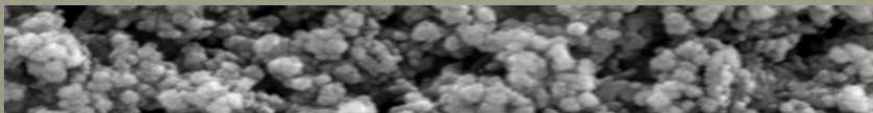
**Brain Barrier (BBB) immaturity, individual susceptibility factors**, and aging that may be associated with both subtle BBB alterations and a progressive increase of CCL2 production.

Source: *Slow CCL2-dependent translocation of biopersistent particles from muscle to brain*. Khan – [BMC Med. 2013; 11: 99](#) [7]

There are hundreds of other studies showing the toxicity of aluminum, and Dr. Humphries summarized just a few of those:

## More properties of Al<sup>+3</sup>

- ◆ **Damages thymocyte and lymphocyte plasma membrane at clinically relevant doses (Kamalov 2011)**
- ◆ **Enhances excitotoxicity brain (Jovenova-Nesic PMID: 23387884)**
  - ◆ Activates brain microglia, increases brain inflammation (Exley 2010 PMID: 20153253)
- ◆ **Interferes with gene expression (literature abundant)**
- ◆ **Increase vascular endothelial adhesiveness. (Oesterling 2008)**
  - ◆ Pro-inflammatory, CV disease risk



15

[8]

### Why Isn't Toxic Aluminum Replaced as an Adjuvant in Vaccines?

Next, Dr. Humphries addresses the most obvious question that must be asked regarding the presence of a known toxin like aluminum in vaccines: Why isn't it replaced with something less toxic or non-toxic?

As she investigated the answer to this question, she believes she found it in a [2004 study published in The Lancet](#) [9]. The study made this rather puzzling statement:

“Despite a lack of good-quality evidence we do not recommend that any further research on this topic is undertaken.”

Why?

This study, [funded by the World Health Organization](#) [10], stated the reason:

Assessment of the safety of aluminium in vaccines is important because replacement of aluminium compounds in currently licensed vaccines would necessitate the introduction of a completely new compound that would have to be investigated before licensing. No obvious candidates to replace aluminium are available, so withdrawal for safety reasons would severely affect the immunogenicity and protective effect of some currently licensed vaccines and threaten immunisation programmes worldwide.<sup>4,5</sup>

[11]

Adverse events after immunisation with aluminium-containing DTP vaccines: systematic review of the evidence. Dr Tom Jefferson – [The Lancet Volume 4, No. 2, p84–90, February 2004](#) [9]

## Aluminum Containing Vaccines the CDC Wants Pregnant Women to Receive

So with this background on why vaccine companies continue to use aluminum in vaccines, and why governments allow it, here are the aluminum-containing vaccines that the CDC recommends for pregnant women:

### Pregnant women recommendations:

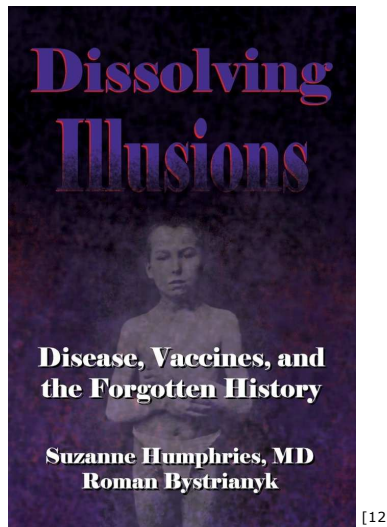
source CDC, Guidelines for vaccinating pregnant women

- **Hep A** (amorphous aluminum hydroxyphosphate sulfate, bovine albumin, formaldehyde, neomycin, sodium borate, MRC-5 (human diploid) cells)
- **Hep B** (yeast protein, soy peptone, dextrose, amino acids, mineral salts, potassium aluminum sulfate, amorphous aluminum hydroxyphosphate sulfate, formaldehyde)
- **Influenza vaccine (+or – mercury) depends on packaging**
- **Meningococcal if indicated** (formaldehyde, phosphate buffers, Mueller Hinton agar, Watson Scherp media, Modified Mueller and Miller medium- beef infusion )
- **Tdap** (formaldehyde, glutaraldehyde, aluminum hydroxide, polysorbate 80 (Tween 80), Latham medium derived from bovine casein, Fenton medium containing a bovine extract, Stainer-Scholte liquid medium)
- **Td**(aluminum potassium sulfate, peptone, formaldehyde, thimerosal, bovine muscle tissue (US sourced), Mueller and Miller medium(containing bovine extracts)

Watch the entire presentation:

**Dissolving Illusions: Disease, Vaccines, and The Forgotten History**  
by Dr. Suzanne Humphries and Roman Bystranyk





[12]

[Free Shipping Available!](#) <sup>[12]</sup>[Learn More](#) <sup>[12]</sup>

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URL to article: <http://vaccineimpact.com/2015/aluminum-is-toxic-to-all-life-forms-so-why-is-it-used-in-vaccines/>

URLs in this post:

[1] Full lecture series here: <https://www.youtube.com/playlist?list=PLgH2vCx5TOgWuQtnPkwtwgrn5D-2pjhgc>

[2] Int J Alzheimers Dis. 2011; 2011: 276393: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3056430/>

[3] Image: <http://vaccineimpact.com/wp-content/uploads/sites/5/2015/03/Kawahara-graphic-aluminum.jpg>

[4] Dr. Verstraeten: <http://www.ncbi.nlm.nih.gov/pubmed/9264541>

[5] Front Immunol. 2013 Jan 10;3:406: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3541479/>

[6] Pediatr Nephrol. 1991 Jan;5(1):5-11.: <http://www.ncbi.nlm.nih.gov/pubmed/2025537>

[7] recent study: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3616851/>

[8] Image: <http://vaccineimpact.com/wp-content/uploads/sites/5/2015/03/More-Properties-of-Aluminum-toxicity.jpg>

[9] 2004 study published in The Lancet: <http://www.thelancet.com/journals/laninf/article/PIIS1473-3099%2804%2900927-2/fulltext>

[10] funded by the World Health Organization: <http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0021332/>

[11] Image: <http://vaccineimpact.com/wp-content/uploads/sites/5/2015/03/no-aluminum-replacement.jpg>

[12] Image: [http://www.tropicaltraditions.com/dissolving\\_illusions.htm](http://www.tropicaltraditions.com/dissolving_illusions.htm)

[13] Image: [http://network.sophiamedia.com/openx/www/delivery/ck.php?n=af3e0a62&cb=INSERT\\_RANDOM\\_NUMBER\\_HERE](http://network.sophiamedia.com/openx/www/delivery/ck.php?n=af3e0a62&cb=INSERT_RANDOM_NUMBER_HERE)

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