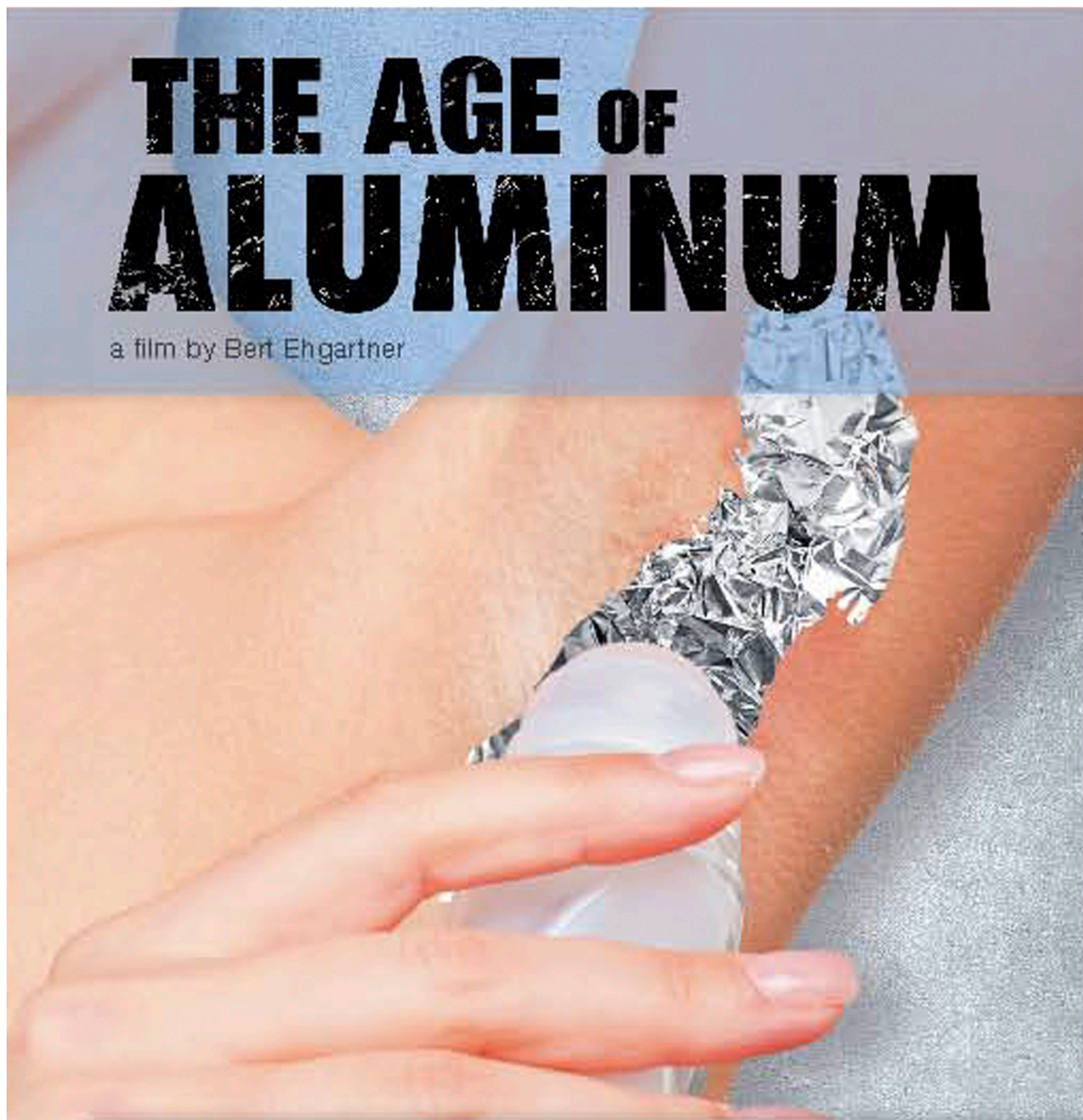


# THE AGE of ALUMINUM

a film by Bert Ehgartner



## Screening Guide

[www.ageofaluminum.org](http://www.ageofaluminum.org)

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## About the Film

Aluminum is an integral part of our daily lives, from cooking pans and computers, to soda cans, cosmetics, and vaccines. But how much do we know about its impact on human health and the environment?

Based on Bert Ehgartner's groundbreaking book *Dirty Little Secret – The Aluminum Files*, **The Age of Aluminum** is the first film to explore the metal's little-known darker side. Through interviews with leading scientists and researchers, along with the personal stories, the film reveals how aluminum exposure has triggered serious health consequences and environmental damage. Representatives of the aluminum industry defend its safety record.

Long known as a neurotoxin, many scientists suspect aluminum is linked to such modern scourges as breast cancer, Alzheimer's disease, allergies, and autism. The documentary looks at how aluminum may be the "universal toxin" underlying the increase in epidemic levels of chronic illness and age-related neurological disorders.

Aluminum mining and manufacturing have also created acute environmental problems in several parts of the world. The film documents the devastating effects of aluminum mining in South America, as well as environmental disasters in Hungary and the UK.

Ultimately, **The Age of Aluminum** asks, why isn't more research urgently being conducted on aluminum and human health, and what can we do now to avoid its negative impact on our lives?

Running time: 49 and 90 minutes

## About the Toolkit

This toolkit is intended to help you plan a screening of **The Age of Aluminum** and to strategize ways to empower consumers with the knowledge they need to protect themselves from aluminum exposure that could be harmful to their health and that of their families. Outlined here are tips for:

- Organizing your screening
- Engaging participants in meaningful discussion
- Empowering audiences to take action

After reading the guide, if you still have questions about how best to cultivate awareness and action this issue, please send us an email. We're here to help!

In addition to the guide, we also offer other tools you may find useful, including a downloadable web banner, press release, sign-in sheet, and audience survey. These are available on our website at <http://www.ageofaluminum.org>.

## How to Host a Screening

Screenings can be held for smaller groups in a private home, or at larger venues, including a library, school campus, place of worship, or holistic health center. The tips outlined here can be adapted for diverse audiences.

Hosting a screening of **The Age of Aluminum** is both easy and satisfying as you assume an active role in protecting and promoting your community's health. Some pre-planning in the weeks leading up to your screening will ensure a successful event with optimal turnout and support from your community.

Also important will be familiarizing yourself with issues related to aluminum and human health (see Aluminum Questions & Answers, page 9). Additional background information is available at [www.ageofaluminum.org](http://www.ageofaluminum.org).

### STEP 1. GETTING STARTED

At least four weeks prior to your event, you will want to begin planning the screening. Following are suggestions on how to best prepare, with a menu of options to support a successful screening.

#### Set Goals

Setting goals will help to ensure that you have a successful event. In your ideal scenario, what outcomes do you hope to achieve? What actions would you like your audience to take after “the lights come up”? Some ideas are:

- Commit to learning more about the health risks associated with aluminum by reviewing the aluminum product list, Q&As, medical study highlights, and related links on **The Age of Aluminum** website.
- Take steps to avoid, and ideally eliminate, exposure to aluminum through products or medicines that can be applied, injected, or ingested.
- Consider taking a test to measure his/her aluminum ‘body burden,’ (i.e., accumulation of the metal in the body)
- Raise awareness among family and community members about the risks of aluminum exposure, including promoting the film and website link via social media or organizing a public screening of **The Age of Aluminum** under the Community Screening license.
- Write a letter to their elected officials calling for greater government research into the impacts of aluminum on health and regulatory measures.

#### Consider Who to Invite

For example:

- Parents
- Pediatricians
- Alternative healthcare practitioners (e.g., nutritionists, chiropractors, homeopaths)
- Representatives of consumer safety, advocacy, and environmental organizations

- Community leaders/elected officials
- Business leaders
- Journalists
- Educators/academic community
- Caregivers

## Plan the Agenda

Based on your established goals, create an agenda and consider appropriate steps for facilitating conversation and action after the film. The following menu provides some ideas that have worked well for other groups.

## Menu of Ideas for Your Screening

- **Invite a Guest Speaker.** Identify someone locally (e.g., a consumer advocate or healthcare practitioner) who could speak to some of the issues raised in the film such as steps people can take to prevent metals toxicity, the impact of accumulated toxins in the body over time, and actions citizens can take to push for greater government research into the impact of aluminum on human health. A good place to start is with individuals/organizations engaged in issues related to vaccine safety, autism, breast cancer, or Alzheimer's disease. You might also explore hosting a nationally-recognized speaker remotely via Skype. For referrals, see: [www.ageofaluminum.org](http://www.ageofaluminum.org)
- **Potluck or Pizza Party.** Consider hosting a potluck or pizza party before or after the screening to allow opportunities for networking and brainstorming.
- **Brainstorm.** After the screening, take a few minutes to discuss all the ways participants are currently being exposed to aluminum (e.g., through deodorants, pots and pans, vaccines, lipsticks, sunscreen) and alternative products that are safer to use.
- **Administer a Survey.** Following the screening and discussion, ask participants to fill out a brief survey (forms are available on **The Age of Aluminum** website) assessing their knowledge of the issue before/after the screening and commitment to taking action. Survey results will be used to help evaluate the effectiveness of screenings at achieving key goals and audience readiness to take action.

## STEP 2. CONDUCTING THE SCREENING

At the screening itself, keep in mind the following suggestions for a successful event:

- Allot enough time for the screening. You should plan for at least two hours to show the film and hold a discussion.
- Start on time. Aim to begin no later than ten minutes from the posted time. This will give latecomers an opportunity to join the group without delaying the screening.

- Begin by thanking people for coming and acknowledging any volunteers. To introduce the film, you might start by sharing why you decided to host an event on this topic. Conclude your introduction by presenting attendees with some questions or ideas to ponder while viewing the film. This will help spur post-screening conversation. You might say, for example, “After the film is over, we will have a dialogue and discuss possible next steps we can take to make a difference. So please write down any ideas that come to you while watching the film.”
- Facilitate a dialogue after viewing the film. Focus on your established goals and desired outcomes for the screening (see page 4). We’ve included some discussion questions on pages 6-7 to help you prepare. You may want to choose a subset of these to get the conversation started, while also inviting audience members to offer comments/ask questions. As facilitator, be sure to keep the dialogue moving, encouraging those who comment to be concise so that others may also participate.
- Invite your audience to TAKE ACTION. Actions can include:
  - Joining the film’s Facebook community for regular updates and to connect to others who are concerned about this issue.
  - Sharing comments about the film and its message on Facebook and via Twitter, along with the film’s website URL.
  - Committing to talking about the film with family, friends, and colleagues.
  - Signing the latest petition demanding greater government vigilance of aluminum and its health impacts. (See [www.ageofaluminum.org](http://www.ageofaluminum.org) for up-to-date information on petitions.)
  - Writing a letter to their elected officials asking that the health effects of aluminum be fully investigated. To help facilitate this, you might provide a sample letter and pre-addressed envelopes.
  - Making a donation to support **The Age of Aluminum** community engagement campaign through the film’s website.
  - Making a donation to support ongoing scientific research into the health effects of aluminum (see website for additional information).
- Close the program with a few words. Emphasize that at the end of the day, consumers need to be empowered with the knowledge to protect their own health without waiting for government intervention. Thank any volunteers for helping and people for coming and remind them to fill out the event sign-in sheet.

Refer attendees to [www.ageofaluminum.org](http://www.ageofaluminum.org) to download free resources, including an aluminum product guide, and to access information on how to host their own screenings. Encourage them to sign up to the film’s Facebook page for regular updates.

## Discussion Questions

- Prior to watching the film, how much awareness of aluminum toxicity did you have? What key facts/issues stood out to you?

- The response in the film from aluminum industry representatives is ‘don’t worry.’ Was this convincing to you? Essentially, they are adopting a ‘buyer beware’ approach. Is this enough?
- Pharmaceutical companies say that aluminum is needed to make vaccines work. Should families be willing to accept the unknown effects of aluminum toxicity in exchange for the theory of ‘herd immunity,’ in other words that vaccines are necessary to protect the greater population?
- Gunter Parole, a former accountant in Germany, is portrayed in the film struggling with severe cognitive decline as a result of prolonged antacid use. What responsibility do pharmaceutical companies and the medical community have to make sure that packaging is understood and read by all patients?
- Many items have toxicity, how much risk is acceptable? Should people be fully informed about levels of risk?
- Why has aluminum not been perceived as inherently toxic, like lead and cadmium? What is the government’s interest in limiting research and funding for research?
- Should people wait for a government pronouncement/mandate before taking action to protect themselves from a perceived threat? How much of a risk should the public be willing to assume? How can citizens take their power back in the face of corporate interests and their influence on policymakers, doctors, and others charged with protecting human health?
- Dr. Christopher Exley says in the film that a “Pandora’s box has been opened” and that “we must learn to live in the aluminum age.” What does this mean?

### **Step 3. FOLLOWING UP AFTER THE SCREENING**

Send an email thanking your attendees. Below are some suggested steps on how to use your email effectively:

- Ask who else they know who might want to be part of the mailing list.
- Encourage them to join the film’s Facebook page for regular updates.
- Remind them to share their interest in the film and what they learned with friends and colleagues.
- Provide information on how they can go about hosting a screening of **The Age of Aluminum**.

We also urge you to send photos of your event and any testimonials and feedback to [info@videoproject.com](mailto:info@videoproject.com), along with any completed survey forms that you collected.



## Event Checklist

### At Least Four-Six Weeks Before

- ☐ **Find Partners.** Identify who is working on this issue in your community or state, and contact them as possible outreach partners.
- ☐ **Clarify Goals.** Identify the outcomes you'd like to see from the event.
- ☐ **Determine Budget.** Knowing the financial resources you have to work with will guide decisions about the venue, speakers, publicity, and refreshments.
- ☐ **Plan Program & Invite Speakers.** Considering your goals, decide how you will structure the event (speaker, panel, discussion, etc.) and who you will ask to speak.
- ☐ **Book Venue, Date, and Time.** Based on your plan for the program and the anticipated audience size, choose a suitable venue. Confirm availability of audiovisual equipment.
- ☐ **Make Invitee List.** Extend invitations to key organizations and influencers in your community.
- ☐ **Begin Promoting Event.** Use a combination of publicity avenues such as email, social media, newsletters, newspapers, radio, mail, and posters. See The Age of Aluminum website for downloadable publicity materials – [www.ageofaluminum.org](http://www.ageofaluminum.org).
- ☐ **Order DVD.** Signup for the appropriate screening option on The Age of Aluminum website.

### Two Weeks Before

- ☐ **Confirm Speakers.** Articulate your expectations and goals for the event.
- ☐ **Plan Handouts.** Think about what information and materials you want the audience to have. Plan for design and printing. See sample handouts on **The Age of Aluminum** website.
- ☐ **Plan Refreshments.** If possible, arrange for locally-sourced food or drinks.
- ☐ **Test DVD.** Make sure you've ordered **The Age of Aluminum** DVD and tested it in a DVD player.
- ☐ **Recruit Event Volunteers.** Make sure you contact potential volunteers to help at the event.

### One Week Before

- ☐ **Update Promotion.** Send out reminders through emails and social media.
- ☐ **Reconfirm AV Equipment.** Consider securing a technician to run audiovisual equipment at the event.
- ☐ **Finalize Set-up.** Ensure that you will have necessary chairs and tables, and other set-up needs.
- ☐ **Finalize Program.** Determine what will happen when, and who will do what; for example, who will introduce the film and speakers, and facilitate the discussion. Also, identify possible questions to kick off the discussion, if necessary (see pages 6-7 for ideas).
- ☐ **Assign Volunteers.** Get help to buy refreshments, set up the space, set up tables and chairs, greet attendees as they arrive, handle sign-in sheets, and clean up after the event.



## One Day Before

- ☐ **Assemble Supplies.** Gather materials, refreshments, and everything else you'll need at the venue. Don't forget the DVD of the film!
- ☐ **Test Audiovisual.** Make sure equipment is operating properly and the DVD works in the equipment.
- ☐ **Remind Volunteers and Speakers.** Confirm arrival times and any other details or assignments. Remind speakers of their topic and time limits.

## Aluminum Questions & Answers<sup>1</sup>

Below is background information designed to provide screening hosts with a basic understanding of aluminum, its uses, and health impacts.

**What is aluminum?** [Aluminum, atomic number 13](#) in the Periodic Table of Elements, is a shiny silvery metal and the most abundant metal in the Earth's crust. Aluminum's chemical [properties](#) make it ideal for crafting into thousands of objects used on a daily basis. A highly-reactive element that readily [binds](#) with many others to form useful products, aluminum also presents a danger to living creatures, as it has no role in living systems.

**Where is aluminum found?** In nature, all aluminum atoms are [tightly bound](#) with other elements in the form of compounds. Bauxite is the most abundant aluminum ore ( $\text{Al}_2\text{O}_3 \cdot 3\text{H}_2\text{O}$ ). The major sources of bauxite are Jamaica, Brazil, and Australia.

**What are the benefits of aluminum over other metals?** Aluminum is lightweight and can be manufactured into many useful products. Among its many useful benefits, aluminum can be [recycled](#) cost effectively, increases the fuel efficiency of cars and airplanes, is a good conductor of electricity and does not corrode.

**What is aluminum's unique feature in biology?** Until the process of smelting aluminum was discovered in the late 1800s (1889), little bioavailable aluminum entered living beings. Life on Earth evolved in the absence of bioavailable aluminum. Aluminum has no [biological function](#) in any living organism and its bioaccumulation can result in dysfunction and toxicity. The lack of an evolutionary presence and role for aluminum in living systems has rendered all life defenseless to its mechanisms of toxicity. Aluminum is perceived by living things including humans as a [foreign substance](#), or antigen, due to its lack of recognition in the biological environment, and as a toxin.

**What are some of aluminum's uses?** Aluminum was once considered so rare and exotic; it was used to cap the Washington Monument, signifying its importance. Since the advent of commercial smelting, aluminum has become the [second most used metal](#) after steel. Aluminum is a key [component](#) in construction, transportation, packaging, [food](#), household products, [prescription and over-the-counter medicines](#), [baby formulas](#), [vaccines](#), and [cosmetics and skin care products](#).

## Aluminum and Health

**Is aluminum toxic in its solid metal form?** While aluminum metal is not inherently dangerous some individuals may be sensitive to its presence, for example, on the skin.

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<sup>1</sup> See Age of Aluminum website for links to more information/source materials.

Aluminum becomes dangerous when it is a source of biologically-reactive aluminum and this can be on the surfaces of the body, such as the skin, or upon entry into the body where it will be transported around the body, primarily in the blood. All forms of aluminum have the potential to be toxic. Those forms which are often most dangerous are those which are able to dissolve quite quickly to release biologically reactive forms of the metal.

**What is the most important information to know about aluminum toxicity?**

Aluminum is a concern for all age groups. Aluminum can cause immediate and long term health consequences. Aluminum is toxic to all living beings, and can substantially be avoided and eliminated from the body. A buyer beware approach should be taken when at the market and physician's office, as official policies regarding aluminum have not kept pace with new independent scientific research on aluminum's harmful effects on all living creatures.

**How much aluminum is toxic?** All aluminum has the potential to exert toxicity and whether or not it is toxic depends less upon the amount and more upon the circumstances associated with where it is found. For example, 1g of aluminum applied as an antiperspirant to the underarm is unlikely to result in overt or immediate toxicity while the same amount in a neuron in the brain would kill the neuron within hours.

**Does aluminum bioaccumulate?** The accumulation of aluminum in the body is the result of the balance between our exposure and its excretion. Excretion occurs through feces, urine, sweat, hair, nails and exfoliation. Aluminum accumulates in the body with age and especially so in bone and in tissues with long-lived cells, such as the neurons of the brain.

**What commonly-used consumable products contain aluminum?** Foods can contain aluminum as plants and animals bioaccumulate from their environments. Aluminum is also often present as food [additives](#). Aluminum is found in some baking powders that are used in baked goods such as breads, tortillas, pastries, cookies, pizza crust, and many packaged mixes. Powdered drink mixes such as hot cocoa, non-dairy creamers, and baby formulas can contain significant quantities of aluminum. Some table salts and many food dyes contain aluminum. Some prescription, over-the-counter and injected medicines, drugs and vaccines contain aluminum. Sometimes the aluminum is an active ingredient, and sometimes it is used as a dye or coating.

**Why is aluminum added to food? Medicines? Vaccines? Cosmetics?** Aluminum is added to food as a drying agent, colorant, and as an emulsifier. Aluminum is an ingredient in many food and medicine dyes to make them more attractive and appealing. Aluminum is added to vaccines to stimulate an immune response or to require less antigen, a cost savings. Aluminum is an active ingredient in some antacids. Aluminum salts are effective anti-caking agents and might be added to anything where you are looking for a smooth and easily applied final product with no lumps, for example in sunscreens and sun blocks. Aluminum is the active ingredient in antiperspirants effectively preventing the functioning of sweat glands.

**What are the known harms of consuming aluminum?** Aluminum in antacids has been scientifically linked to food allergies. Almost any allergy can be induced by exposure to aluminum. Aluminum has been linked to Alzheimer's disease, Parkinson's disease, autoimmunity, cognitive impairment, neurological disorders, ADD/ADHD, eczema, diabetes, asthma and many other chronic health conditions.

**Why has aluminum toxicity not been more widely recognized?** Aluminum industry lobbyists and spokespeople have helped define aluminum as an inert and safe material, and dissuade health authorities and policy makers from engaging in further research. In the 1970's, aluminum was considered a promising research avenue for the causation of many diseases, but funding suddenly diminished, slowing down the pace of scientific progress. Recently, scientists have taken a renewed interest in the topic of aluminum toxicity, and have made important new discoveries regarding aluminum's links to many of the chronic conditions affecting human health in the 21<sup>st</sup> century.

## **Preventive and Remedial Measures**

**Are there alternatives to aluminum?** Few metals possess the many beneficial qualities of aluminum, but the capacity to cause harm when it enters living beings is great. Care should be taken to eliminate aluminum from products applied to food production, medicines, and cosmetics. Safer more environmentally friendly mining and processing techniques should be developed and regulated. Products should be adequately safety tested before allowing human consumption.

**Do aluminum-free alternatives exist?** Vaccine researchers are looking for safe alternatives to aluminum adjuvants, but so far none have been identified. Aluminum free antacids, deodorants, baking powders, cosmetics, and sunscreens are available. Two consumer organizations, [Campaign for Safe Cosmetics](#) and [Environmental Working Group's Skin Deep Cosmetics](#) Database rate the safety and toxicity of skin care products and provide information about ingredients.

**What are alternate names for aluminum in products?** Aluminum Lake dyes, Alumina, Alum, Aldioxa, ticholorohdrex glycine are some of the compounds containing aluminum.

**How can exposure to aluminum be minimized?** Avoiding products that contain aluminum requires time and effort to read labels and become familiar with where aluminum lurks in products, especially those used on a daily basis. Those who are considering becoming pregnant should take extra care to avoid aluminum containing antiperspirants, vaccines, antacids, cooking pans, and cosmetics. If possible, breast feed to avoid aluminum containing formulas, or research aluminum free formula alternatives. Check the ingredients for dyes and other hidden sources of aluminum. Commercial baked goods and aluminum containing bakery mixes should be avoided.

**Can you be tested for aluminum body burden?** There are tests for aluminum, but their reliability has been questioned by experts. Hair analysis can only determine if aluminum in the body is being excreted, and results can be inaccurate due to contamination from hair care products containing aluminum additives and water or other environmental contamination. Best estimates of the human body burden of aluminum can be obtained using urinary excretion of aluminum over 24h periods. These are currently the only reliable estimates of whether an individual is overloaded with aluminum.

**Can aluminum be removed from the body?** Recent studies at Keele University in England have shown that silicic acid binds to aluminum and removes it from the body. Silica rich mineral waters have been shown to reduce the aluminum body burden, and in some instances, resulted in improvements in cognitive function in Alzheimer's patients. A silicon-rich mineral water is defined as one with at least 30 mg/L or ppm 'silica'.

## **Selected Resources for Taking Action**

### **Online News/Blogging Sites**

<http://www.gaia-health.com>  
<http://www.greenmedinfo.com>  
<http://www.mercola.com>

### **Organizations and Groups**

#### **American Autoimmune Disease Association**

<http://www.aarda.org>

The only national nonprofit health agency dedicated to bringing a national focus to autoimmunity, the major cause of serious chronic diseases.

#### **AutismOne**

<http://www.autismone.org>

A nonprofit, parent-driven organization that provides education and supports advocacy efforts for children and families touched by an autism diagnosis.

#### **Breast Cancer Fund**

<http://www.breastcancerfund.org>

Translates the growing body of scientific evidence linking breast cancer and environmental exposures into public education and advocacy campaigns that protect our health and reduce breast cancer risk.

#### **Campaign for Safe Cosmetics**

<http://safecosmetics.org>

A coalition effort launched in 2004 to protect the health of consumers and workers by securing the corporate, regulatory, and legislative reforms necessary to eliminate dangerous chemicals from cosmetics and personal care products.

#### **Children's Medical Safety Research Institute**

[cmsri.org](http://cmsri.org)

CMSRI supports research to address eroding national health, particularly in very young and elderly populations. CMSRI is interested in discovering changes in human exposures that may be contributing to chronic health conditions.

#### **Environmental Working Group**

<http://www.ewg.org>

Conducts original, game-changing research that inspires people, businesses, and governments to take action to protect human health and the environment.

#### **Keele University Meetings on Aluminum**

<http://www.keele.ac.uk/aluminium/keelemeetings/>

Held biannually, the Keele Meetings offer a global forum for discussion of new,

unpublished research at the forefront of research on aluminum and its impact on human health.

### **National Vaccine Information Center**

<http://www.nvic.org>

The oldest and largest consumer led organization advocating for the institution of vaccine safety and informed consent protections in the public health system.

### **Scientific Articles**

- Aluminum hydroxide injections lead to motor deficits and motor neuron degeneration – Dr. Chris Shaw and Michael Petrik  
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2819810/?tool=pubmed>
- Aluminum in Human Breast Tissue – Dr. Chris Exley , et al  
<http://www.sciencedirect.com/science/article/pii/S0162013407001304>
- A Molecular Mechanism of Aluminum-induced Alzheimer's disease? – Dr. Chris Exley  
<http://www.sciencedirect.com/science/article/pii/S0162013499001257>
- Non-invasive therapy to reduce the body burden of aluminum in Alzheimer's disease – Dr. Exley, et al  
<http://www.ncbi.nlm.nih.gov/pubmed/16988476>
- A Systems biology approach to the blood-aluminum problem: The application and testing of a computational model – Dr. Exley, et al  
<http://www.sciencedirect.com/science/article/pii/S0162013407001389>
- Silicic Acid is a significant influence upon the atomic absorption signal of aluminum measured by graphite furnace atomic absorption spectrometry – Dr. Exley, et al  
<http://www.sciencedirect.com/science/article/pii/S0162013401003130>
- Aluminum and Medicine  
[http://www.bodycures.com/wp-content/uploads/2013/09/AluminiumAndMedicine\\_ChristopherExley2008.pdf](http://www.bodycures.com/wp-content/uploads/2013/09/AluminiumAndMedicine_ChristopherExley2008.pdf)

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