


A 3D molecular model background with a red and blue color scheme. It features a central red structure with several protruding, rounded, and elongated components, resembling a protein or a complex molecule. This is surrounded by several blue and white beaded chains, likely representing DNA or RNA strands. The overall composition is set against a dark red background with white geometric shapes at the corners.

# **TOXINS AND HEART DISEASE:**

**ENVIRONMENTAL  
CARDIOLOGY  
&  
THE NEW SCIENCE OF STAYING  
YOUNG AT HEART**

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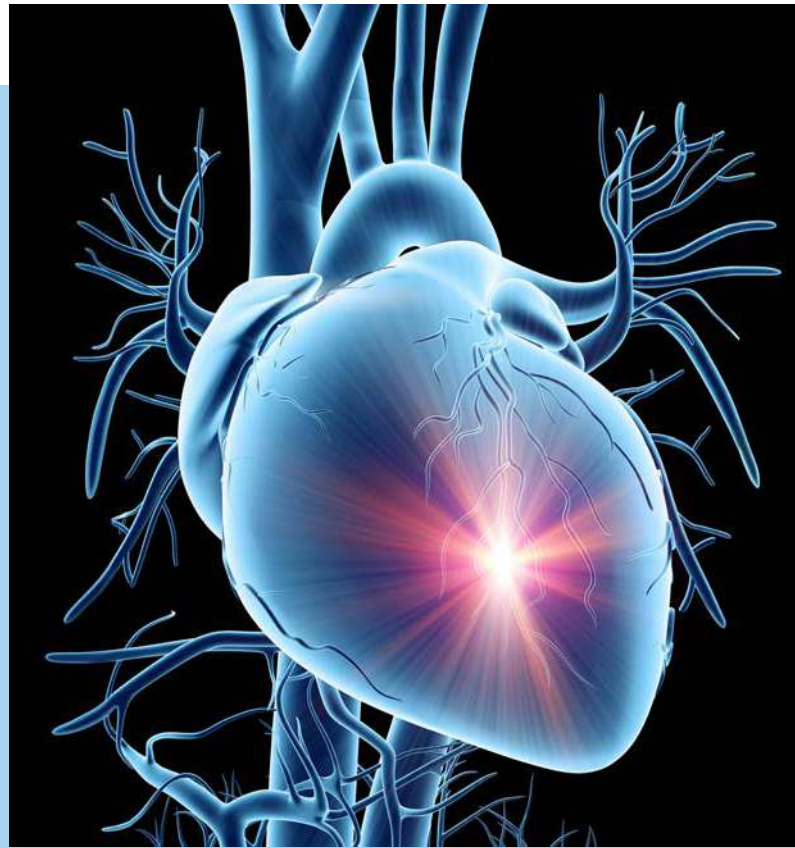


Your heart is a miracle that can keep pumping for 100 years or more. It can never take a break. Learning how to take care of your heart is an important way to feel good every day for decades. The key is to put in good materials (clean water, fruits, vegetables, whole grains) and avoid toxins in homes, kitchens and workplaces.

- Your Heart pumps blood 100,000 times a day.
- Three heart arteries supply this amazing pump blood for energy.
- The heart arteries can become clogged causing heart disease.
- Heart disease is the number 1 cause of death in men and women.
- One in three persons will die of heart disease.
- Heart disease is largely related to environmental factors that can be avoided.
- Heart disease can be prevented 90% of the time.
- Heart artery disease is also reversible with changes in environment.
- A heart attack occurs every 25 seconds in the USA.
- Someone dies of heart disease every 40 seconds in the USA.

# What Causes Heart Disease?

Not that long ago heart disease was felt to be an inevitable consequence of getting old. Nonsense! Since the 1960's we have learned that only a small percentage of heart disease is genetic and inevitable. The rest is in your control. Do you smoke, sit a lot, and eat fried and junk foods? Or do you walk, eat organic fruits and vegetables, drink clean water, and never smoke? Scientific studies now indicate that toxins in our food, water, air, homes and workplaces are also causing heart disease. Knowledge of these is powerful.



## Traditional Factors:

- Age and family genetics
- Chronic diseases (high blood pressure and cholesterol, diabetes, obesity).
- Cigarette smoking and secondhand smoke.
- Physical inactivity.

## New Factors:

- Homocysteine levels
- Lipoprotein a levels
- Inflammatory markers (hs-CRP).
- Air pollution
- Environmental heavy metals (lead, mercury, cadmium)
- Environmental chemicals (80,000 in food, cosmetics, products)

# THE NEW HEART DISEASE PARADIGM: ENVIRONMENTAL AND FOOD TOXINS AS A RISK



# Toxins and Heart Disease: Air Pollution As An Example

The major risk factors for heart disease are known and include smoking, junk food diets, lack of physical activity, inadequate stress management, and poor sleep. However these habits are not fully able to predict who gets heart disease and who does not and the environment, that is our air, water, and chemicals in our food and personal products are important new causes.



Air quality has emerged as a major cause of heart disease, most obvious in smokers and second hand smoking. New data is available that air pollution unrelated to smoking is also an important factor.

1 | More polluted cities have higher death rates than least polluted

2 | Air pollution is strongly related to heart disease events and death

3 | Air pollution may damage arteries and cause inflammation

4 | During the 2008 Olympics, factories were closed to limit air pollution and heart disease rates fell rapidly until the factories-opened

5 | Smartphone apps are available to monitor your local air quality



## **Toxins and Heart Disease: Heavy Metals As An Example**

Unfortunately our water, food and home products are often contaminated with chemicals that harm our health. There are hundreds of scientific studies on the impact of heavy metals like lead, mercury, and cadmium on human health and disease. None of these metals have any role in healthy pathways and in fact they interfere with normal function of our cells. We may accumulate them from dental fillings, water supplies, smoking, cosmetics and other seemingly safe sources. Accumulation of these toxins are linked in scientific studies to high blood pressure, heart artery damage, heart muscle damage, and peripheral artery damage in the legs. It is important to avoid sources of these toxins.

## Harmful Effects of Heavy Metals Outside the Heart:

Heavy Metal	Organ Affected	Health Effects
Arsenic	Brain, lungs, GI, Kidneys	Cancer, skin lesions, hearing loss
Lead	Brain, kidneys, liver	Cancers, kidney damage, impaired IQ
Cadmium	Kidneys, bones, liver, lungs	Cancers, kidney damage, COPD, bone damage
Mercury	Brain, kidneys, liver, lungs	Lung damage, kidney damage, brain damage, impaired IQ, eczema



## Toxins and Heart Disease: Sources of Heavy Metal Contamination

In the past, exposures to heavy metals occurred in work accidents where employees were exposed to high levels of toxins acutely. Now many of us are exposed to low levels of these toxins on almost a daily basis. Knowledge of where the exposures come from can be helpful in avoiding diseases developing from these toxins.

- Dental Fillings
- Lipstick
- Eye Makeup
- Talcum Powder
- Skin Lightening Creams
- Cigarettes
- Henna Tattoos
- Hair Dyes
- Candies and Spices
- Toys
- Hookah Smoking
- Fish Consumption



## CHEMICALS AND THE HEART: A TOXIC BREW IN THE HOME

There are an estimated 80,000 chemicals produced in the USA and only about 1,000 have had any studies on their impact on our health. Of those studies, some are worth being familiar with. The importance of this is found in testing showing one chemical, bisphenol A, in the urine of 90% of Americans and other chemicals like phthalates in 99% of pregnant women! Fertility problems are linked to phthalates, asthma has been linked to toluene, and Parkinson's Disease is linked to exposure to trichloroethylene. If you sample the umbilical blood of newborns a terrifying 232 toxic chemicals can be measured! Scary.

PFCs (perfluorinated compounds)	Clothing, cookware, food containers, carpets
Formaldehyde	Carpeting, soaps, detergents, cabinets, glues
Toluene	Paints, flooring, adhesives
BPA	Food cans, receipt paper, CDs, baby bottles
Phthalates	Air fresheners, paper, vinyl tile, varnish
PBDEs (flame retardants)	Furniture, TVs, clothing
PERC	Dry Cleaning

# Dirty Dozen Guide to Food Additives

The Environmental Working Group ([www.ewg.org](http://www.ewg.org)) provides reliable information on toxins in our life and the impact on our health. They have focused on the 10,000 additives allowed in foods including direct additives added during formulation of processed foods and indirect additives from storing and packaging. They publish a list of the 12 worst food additives and their sources and 8 of them are highlighted here.



Additive	Source	Health risks
Nitrates and nitrites	Cured meats like bacon and hot dogs	Stomach cancer, esophageal cancer, rectal cancer
Potassium Bromate	Breads and crackers	Known carcinogen
Propyl Paraben	Preservative in tortillas, muffins, food dyes	Endocrine disrupter, infertility
BHA	Preservative in many foods, chips, cereals	Suspected carcinogen
BHT	Preservative in many foods, chips	Suspected carcinogen
Propyl gallate	Preservative in sausage, lard	Endocrine Disruptor, possible brain tumors
Theobromine	Chocolate, breads, cereal, sports drinks	Reproductive and endocrine effects
Diacetyl	Butter flavoring, dairy products,	Respiratory diseases,



## Dirty Dozen and Clean 15

Each year the Environmental Working Group ([www.ewg.org](http://www.ewg.org)) published a list of foods to buy organic due to high pesticide levels (Dirty Dozen) and foods that may be OK conventionally grown due to low pesticide levels.

### DIRTY DOZEN

1. Apples
2. Strawberries
3. Grapes
4. Celery
5. Peaches
6. Spinach
7. Sweet Bell Peppers
8. Nectarines
9. Cucumbers
10. Cherry Tomatoes
11. Snap Peas (imported)
12. Potatoes

### CLEAN 15

1. Avocados
2. Sweet Corn
3. Pineapples
4. Cabbage
5. Sweet Peas (frozen)
6. Onions
7. Asparagus
8. Mangoes
9. Papayas
10. Kiwi
11. Eggplant
12. Grapefruit
13. Canteloupe
14. Cauliflower
15. Sweet Potatoes

# FIVE ENVIRONMENTAL EXPOSURES THAT INCREASE HEART RISK

Heart disease can be enhanced by risky environmental exposures and the top 5 are listed here. It is wise to be suspicious of additives, chemicals, and long lists of ingredients in packaged and prepared foods.

1

## FISH HIGH IN MERCURY AND POPS

Fish may be the highest source of contamination with mercury and persistent organic pollutants (POPs) like PCBs and Dioxin. These are associated with high blood pressure and heart disease. Avoid seafood with the highest levels of contaminants such as shark, swordfish and tunasteaks.

2

## TEFLON CHEMICALS

Non stick coated cookware, food packaging, and stain resistant coatings often contain perfluorochemicals. The best known is PFOA which has been linked to high cholesterol levels. Fortunately it is being phased out of products. Use cast iron, glass or uncoated cookware. Skip stain resistant coatings on carpets and clothes.

3

## RICE BASED PRODUCTS

Sadly, rice products may have high levels of inorganic arsenic. This may raise blood pressure and cause cancer. Vary your diet to have some rice but also quinoa, barley and couscous. Boiling rice with a lot of water may help.

4

## TAP WATER

Arsenic and lead may be found in tap water and may raise blood pressure. A good water filter system for the whole house is a wise investment for health.

5

## BISPHENOL A

This plasticizer is an endocrine disruptor. More heart disease may result. Avoid plastics and canned foods and use glass and stainless steel.

# 12 Steps To Avoid Environmental Toxins

In the past, exposures to heavy metals occurred in work accidents where employees were exposed to high levels of toxins acutely. Now many of us are exposed to low levels of these toxins on almost a daily basis. Knowledge of where the exposures come from can be helpful in avoiding diseases developing from these toxins.

- 1 Avoid exposure on high air pollution days and avoid exhausts
- 2 Drink filtered water preferably not in plastic containers
- 3 Purchase organic produce to avoid pesticides
- 4 Read food labels and avoid the EWG Dirty Dozen Additives
- 5 Don't smoke
- 6 Replace personal use items like lipstick with those labeled toxinfree
- 7 Replace home cleaning agents with environmentally friendly ones
- 8 Clean out your garage and safely dispose of toxins and old paints
- 9 Cook at home often and keep ingredient lists simple
- 10 Ask questions about your fish and fish oil capsules if you use them
- 11 Avoid plastic containers for cooking or storage
- 12 Avoid non-stick coated cookware

# CONCLUSION

A wise friend told me that a person with health has a 1000 dreams yet a person with poor health has only one dream. I hope this guide can help you achieve your dreams and goals by good health obtained through knowledge and informed choices.

*Good luck!*

*Dr. Joel*



# ABOUT DR. KAHN

Joel Kahn, MD, FACC of Detroit, Michigan, is a practicing cardiologist, and a Clinical Professor of Medicine at Wayne State University School of Medicine. He graduated Summa Cum Laude from the University of Michigan Medical School. Known as "America's Healthy Heart Doc", Dr. Kahn has triple board certification in Internal Medicine, Cardiovascular Medicine and Interventional Cardiology. He was the first physician in the world to certify in Metabolic Cardiology with A4M/MMI and the University of South Florida. He founded the Kahn Center for Cardiac Longevity in Bingham Farms, MI in 2015.

Dr. Kahn has authored scores of publications in his field including articles, book chapters and monographs. He writes health articles and has 6 books in publication including Your Whole Heart Solution, Dead Execs Don't Get Bonuses and The Plant Based Solution, and Lipoprotein(a): The Heart's Silent Killer. He has had appearances on Dr. Phil, The Doctors Show, Dr. Oz, Larry King Now, and the Joe Rogan Experience. He has been awarded a Health Hero award from Detroit Crain's Business. His podcast, Heart Doc VIP, is listened to worldwide.

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