

Hidden Culprits: Toxic Metals, Nutrigenomics & the Cookware Connection



Have you ever thought the metal pan you're cooking in could be changing your child's nutrient absorption, or even affecting their genes? That's what Dr. Renee Joy Dufault's cutting-edge work in nutrigenomics warns us about. She joined us in [Episode 14](#) of The New MDS and will be back in the future.

Dr. Dufault is a former FDA scientist turned nutritional epigenetic expert, focusing on how toxic metals trigger gene-environment interactions that impact health risk via DNA expression.

Nutrigenomics in a Nutshell

- Examines how diet, nutrients, and toxins interact with our genome
- Meaning: what you eat and cook with can turn genes on or off, influencing metabolism, immunity, cognition, and behavior

Toxic Metals: An Invisible Threat

- Common contaminants: lead, cadmium, nickel, aluminum, and arsenic
- Sources include pesticides, industrial pollution, geoengineering, and cookware
- These metals alter gene expression and nutrient metabolism in ways that can impair cognitive function, stress responses, and emotional regulation



Cookware as a Toxic-Metal Vector

- Acidic or high-heat cooking can strip metals from aluminum, copper, and nickel surfaces
- Home-prepared, organic whole foods can still become contaminated if you use low-grade pots and pans
- Through nutrigenomic pathways, toxic metals impair:
Zinc, iron, and magnesium uptake; essential for neurotransmitter synthesis and muscle development.
- Gene-environment signaling can affect detox enzymes and oxidative-stress defenses

Real-World Impacts on Children

- Learning challenges (lower focus, memory issues, irreparable loss of IQ)
- Changes in stress gene expression
- Greater vulnerability to anxiety and immune disorders due to altered detoxification genes

Cook Smart, Protect Kids

Choose high-quality, inert cookware:

- Medical-grade stainless steel: Saladmaster®
- Avoid high-acid cooking (e.g., tomato sauce) in reactive pans
- Pair with nutrient-rich diets: leafy greens, seeds, fermented foods, etc.



Summary

In a world where we think organic foods are enough, we often miss a hidden chemical pathway: our cookware. Nutrigenomics guides us to a deeper truth: what touches our food affects our genes. Let's cook with intention and protect our children at the cellular level.

Watch Episode 31 of The New MDS: Chef, nutritionist, and Saladmaster distributor, Isis Israel, discusses what's in your cookware along with how to prepare delicious and nutritious baby food.