

WORKSHOP

Simple Steps to Detoxify Your Personal Care Products

*Protect your family's health with simple,
actionable steps to reduce your toxic burden*

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What You'll Learn

- 1 Basic Toxicology
- 2 Why do we need low tox products?
- 3 Which products should we swap first?
- 4 Toxic and Low Tox-Friendly ingredients to look for

Hi, I'm Dr. Yvonne!

- PhD in Environmental Toxicology
- Board-Certified by the American Board of Toxicology
- 21-year veteran of Toxicology
- Ex-flavor & fragrance industry
- Mom of 2 girls
- Creator of the Safe Ingredient Academy
- @dryvonneburkart



What is toxic exposure?

A direct or an indirect contact with any natural or man-made substances or agents that can lead to adverse effects in body structure or function, including illness or death.

Sources of Toxic Exposure

Ecosystems

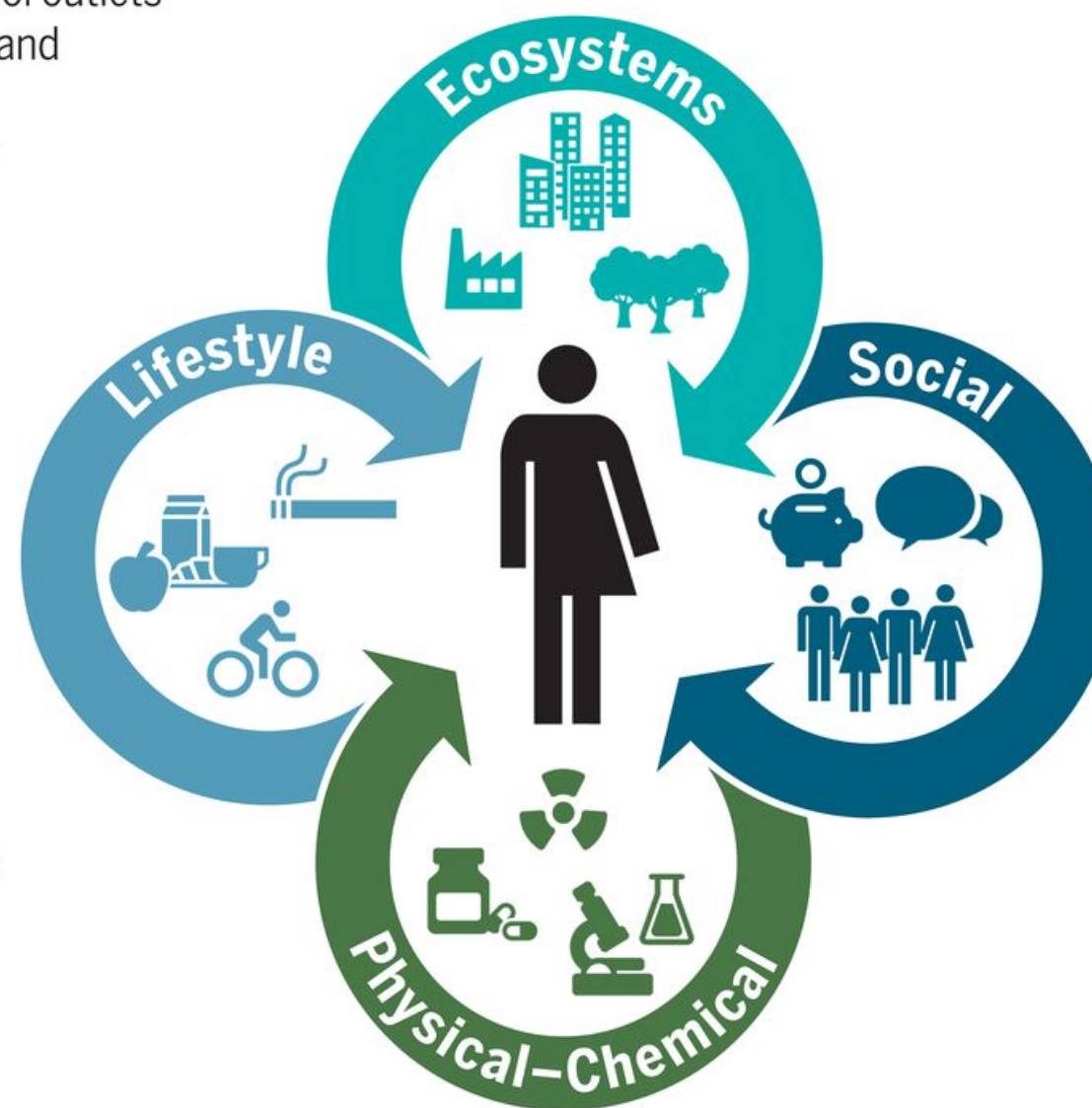
Food outlets, alcohol outlets
Built environment and
urban land uses
Population density
Walkability
Green/blue space

Lifestyle

Physical activity
Sleep behavior
Diet
Drug use
Smoking
Alcohol use

Social

Household income
Inequality
Social capital
Social networks
Cultural norms
Cultural capital
Psychological and mental stress



Physical–Chemical

Temperature/humidity
Electromagnetic fields
Ambient light
Odor and noise
Point, line sources, e.g.,
factories, ports
Outdoor and indoor air
pollution
Agricultural activities,
livestock
Pollen/mold/fungus
Pesticides
Fragrance products
Flame retardants (PBDEs)
Persistent organic pollutants
Plastic and plasticizers
Food contaminants
Soil contaminants
Drinking water contamination
Groundwater contamination
Surface water contamination
Occupational exposures



Routes of Toxic Exposure

- Intravenous*
- Inhalation
- Oral ingestion
- Dermal (skin)
- Ocular (eyes)

*not applicable for beauty & personal care products

Why do we need low tox products?

ENVIRONMENT DETERMINES HEALTH

- Up to 90% of cancer caused by environmental stressors like toxic chemicals (PMID: 26675728)
- Genetics do not influence health outcomes as much as previously assumed

Why do we need low tox products?

CHEMICALS IN EVERYDAY PRODUCTS CAN GET ABSORBED INTO THE BLOODSTREAM, LEADING TO SYSTEMIC TOXICITY

- Switching to products free of [endocrine disruptors] reduced the levels found in adolescent girls on average about 35% in just 3 days (PMID: 26947464)
- Synthetic UV filter chemicals were systemically absorbed and had plasma concentrations that surpassed the FDA threshold (PMID: 31961417)

Why do we need low tox products?

ENDOCRINE DISRUPTORS

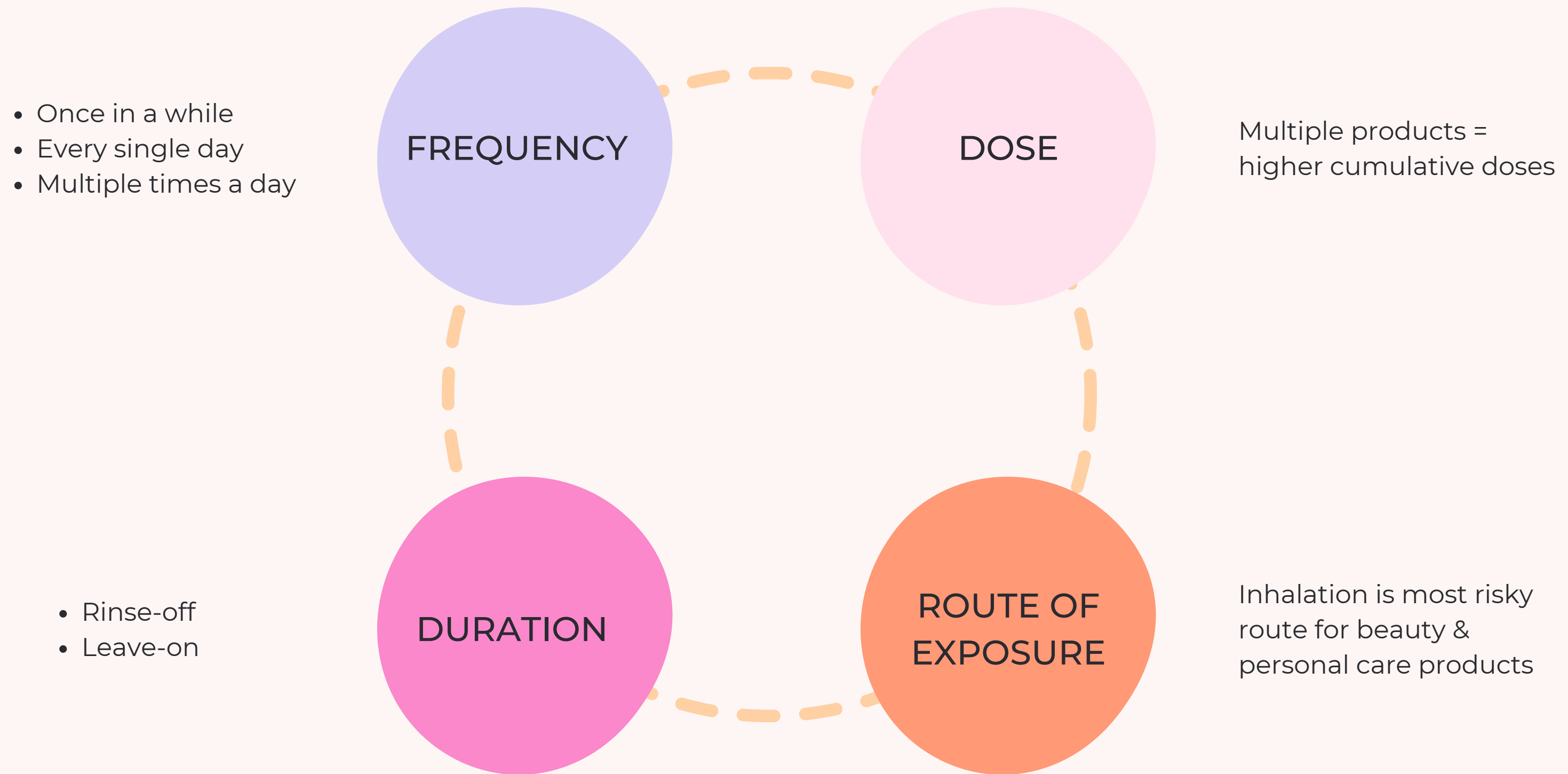
- Effects can be transgenerational by changing the way our genes are expressed (epigenetic)
- Predispose us to diseases in adulthood and these diseases can be passed down to future generations (PMID: 31077281)

Why do we need low tox products?

CHEMICALS IN CONSUMER PRODUCTS CAN
VOLATILIZE, ATTACH TO HOUSE DUST,
AND GET RECIRCULATED

- Volatile chemicals in consumer products, such as fragrances, can attach to house dust and get recirculated (PMID: 29529574)
- Children, especially babies who crawl and put things in their mouths, are at particularly high risk of exposure through contaminated dust.

Factors That Influence Toxicity



How are cosmetics regulated?

- No pre-market approval needed in US and EU (other countries follow same guidelines) *EU is more strict!*
- Not listed on the label
 - Contaminants like carcinogens & industrial solvents that remain in the product
 - “Fragrance” can contain hundreds of chemical compounds that DO NOT have to be disclosed by the manufacturer (likely a source of endocrine disrupting phthalates)



Products to Swap First

1

ALL BABY & KIDS PRODUCTS ESPECIALLY
TOOTHPASTE, HAIR CARE AND BODY LOTION

- Children are highly sensitive to toxic exposure
- Absorption through the oral route is generally higher risk
- Scalp absorption is high due to large volume of hair follicles
- Body lotion covers large areas resulting in potentially higher doses



Products to Swap First

2

PRODUCTS THAT CAN BE INHALED:
AIR FRESHENERS, CANDLES, FRAGRANCES,
ANYTHING THAT CAN BE SPRAYED (SUNSCREEN,
DRY SHAMPOO, TONER, HAIR SPRAY, DEODORANT)

- Inhalation risks have greatest concerns
- Synthetic fragrances are code for "phthalates" (endocrine disruptors)
- Avoid all aerosols (possible carcinogenic benzene contamination)
- Fragrances release volatile organic compounds



Products to Swap First

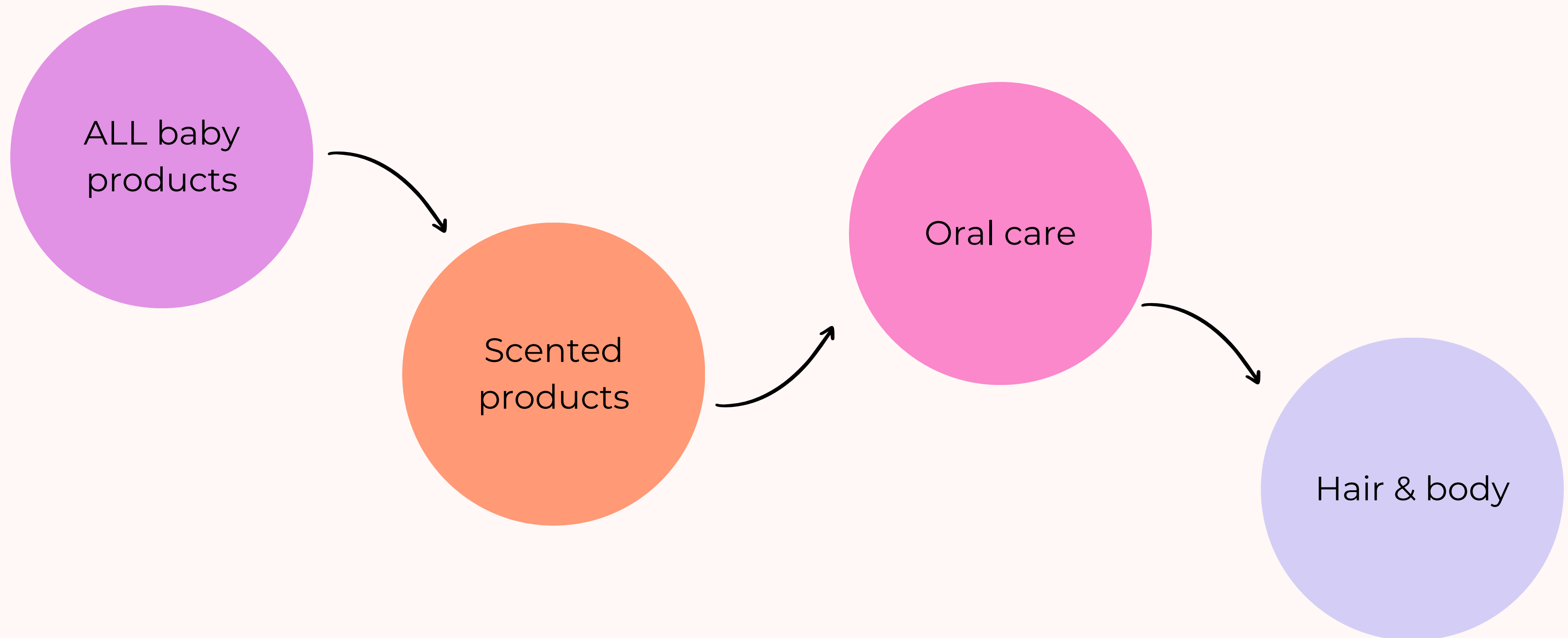
3

PRODUCTS THAT GO ON OR IN YOUR MOUTH:
TOOTHPASTE, MOUTH WASH, DENTAL FLOSS, LIP BALM,
COSMETICS

- Absorption through oral cavity can be high
- Multiple daily uses = higher risks



Products to Swap First



The keys to long-term low tox success

Goals

Education

Practice

Intentions

Reading labels



Worst Toxic Ingredients to Avoid

- "Fragrance" can encompass any combination of nearly 4000 chemicals including carcinogens, endocrine disruptors, and allergens (IFRA Transparency List)
- Ethoxylates
 - Likely contain carcinogenic contaminant 1,4-dioxane and remnants of ethylene oxide)
 - Look for "-eth" at the ending of the ingredient name
 - Surfactants like sodium laureth sulfate
- Polyethylene glycol (PEG-#)
 - Contaminated with: 1,4-dioxane, formaldehyde, and polycyclic aromatic hydrocarbons from petroleum



Worst Toxic Ingredients to Avoid

- Formaldehyde sources
 - PEG-#
 - Preservatives: DMDM hydantoin, Quaternium-15
- Talc
 - Contains asbestos
- per- and polyfluoroalkyl substances (PFAS)
 - Waterproofing agents
 - "fluoro" on the label
 - Avoid all waterproof or long-wear products
- Parabens
 - Preservatives with estrogenic activity



Low Tox-Friendly Ingredients

- Minimally processed & organic are ideal
- Plant ingredients
 - Butters
 - Oils
 - Extracts
 - Essences
 - Juice
 - Pulp
- Surfactants
 - Soap berries & nuts
- Preservatives
 - Sodium anisate
 - Sodium levulinate



Low Tox Product Swaps



WELEDA

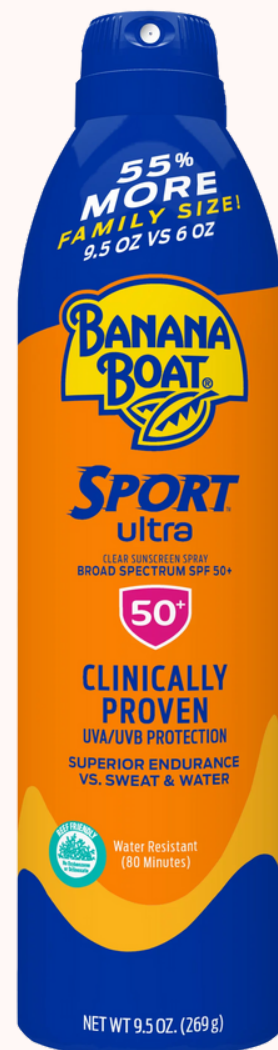
BABY WASH



RISEWELL

KIDS TOOTHPASTE

Low Tox Product Swaps



TWO PEAS ORGANICS

SUNSCREEN



UNDER LUNA

SHAMPOO

Key Takeaways

- Environmental exposures play a greater role in our health than genetics, as previously thought
- Toxicants in personal care products contribute to our toxic load
- Personal care products are not tightly regulated and manufacturers are legally allowed to sell products that contain chemicals of concern
- By switching to low tox products we can reduce our exposure to toxic ingredients and improve our health outcomes
- Always read the label