



Little Lungs

Post Fire for Families

Dr. Bonnie Nedrow N.D.

Strategies

- Assessment
- Avoidance
- Protect and Repair
- Resilience
- Depuration



Assessment

- Potential past chemical exposure from smoke
- Potential past, present, future chemical exposure from dust
- Other daily background exposure



Assessment

Chemicals in Building Materials

- Asbestos
- Chromated copper arsenic (CCA) in pressure treated wood
- Formaldehyde
- Perfluorinated compounds including PFOA
- Phthalates
- Polybrominated diphenyl ethers (PBDEs)
- Short-chain chlorinated paraffins (SCCPs)



Assessment

Chemicals in Homes

- Furniture, carpets, window dressing (formaldehyde, PBDEs)
- Non-stick/non-stain (PFOA)
- Personal care products (phthalates, dioxin)
- Plastics (phthalates, BPA, BPS)
- Paints, fuel, cars (solvents, PBDEs)
- Jewelry (metals, plastics)
- Electronics (PBDEs, metals, BPDEs)
- Pesticides (solvents, metals, dioxin, formaldehyde)



Avoidance

- Air
- Water
- Topical
- Food



Air

Focus on the bedroom first

- Keep the dust out
- Filter the air
- Remove the dust



Air

Keep the dust out

- Remove shoes when entering the house
- Remove clothing when entering the house if exposed to dust
- Close the fireplace damper
- If you live near a road or other dusty location, consider sealing windows with tape or plastic



Air

Filter the air

- HEPPA/carbon combo
- Great brand IQ air \$\$\$
- Good brand Austin Air Healthmate \$\$



Air

Remove the dust

- Damp mop floors and other surfaces
- Vacuum with HEPPA air-sealed vacuum (reliable brands)
 - Nilfisk
 - Air-sealed Miele
 - Electrolux UltraOne Signet and Classic



Dust

Outdoor dust

- Do not sift through the dust
- Dust clean-up requires professional equipment
- Leaf blowing is a big exposure risk right now
- Masks are important when there is dust in the air
- Cover all skin



Water

- Drinking water
- Bath, wash, and cleaning water
- Outdoor water



Drinking Water

- Municipal water is tested (see EWG.org)
- Well water must be tested by owner
- Different contaminants are filtered by different types of filters
- Good brand: PureEffect
- Refer to Dr. Bonnie's water filtration blog

<http://keto-cleanse.com/water-filtration-101/>



Household Water

- Household water is second in importance to drinking and cooking water
- Heating water turns volatile chemicals into vapor
- Skin is a poor barrier to most toxic chemicals
- Fat-soluble chemicals easily enter to subcutaneous body fat and then redistribute



Outdoor Water

- Edible plants can absorb chemicals from the ground
- Swimming pools are a potential collection location for air-borne chemicals from the smoke and dust
- Chemicals in pools and hot tubs can compound exposure to new air pollution by creating a “chemical soup”



Topical Exposure

Dust

- Keep all skin covered when dust is present
- The neck is particularly sensitive, if you are wearing a mask, also cover your neck.
- Small children are more vulnerable because they have large skin surface areas compared to their size



Topical Exposure

Body care products

- Avoid body care products with chemicals, they can increase absorption of chemicals in the dust
- For clean topical products go the The Environmental Working Group database (skindeep.org)



Food

- Plants can collect toxins from soil and water
- Wash foods with mild soap to remove or reduce chemicals
- Toxic compounds bioaccumulate up the food chain, vegan diet shown to contain the least chemicals
- Breast is best, despite the tendency for breast milk to bioaccumulate fat soluble compounds



Treatment

Not all of the following suggestions are appropriate for all of these groups (refer to summary at the end)

- Preconception
- First trimester
- Second trimester
- Third trimester
- Nursing mother-infant pair
- Nursing toddler on solid foods
- Preschooler



Protect and Repair

- Antioxidants
- Phytonutrients
 - Polyphenols,
 - Flavonoids
 - Glucosinolates
- Iron in pregnancy
- Liver support
- Probiotics
- Avoid sugar and processed foods



Antioxidants

- Fruits and vegetables
 - Berries
 - Red pepper
 - Nuts and seeds
 - Artichoke, broccoli
- Vitamins and supplements
 - Selenium
 - Vitamin C



Phytonutrients

- Fruits and veggies
 - Berries, pomegranates,
 - Cabbage, spinach, broccoli, onion, pumpkin
- Beverages and treats
 - Green tea
 - Dark chocolate
- Herbs and spices
 - Rosemary, Curcumin, star anise
 - Garlic



Iron in Pregnancy

Iron competes with toxic metals for absorption

To enhance iron and decrease other metal absorption:

- Foods: leafy greens, nuts, dried fruits, nuts and seeds, broccoli, spinach
- Herbal tea 1-3 cups per day (not until 3rd trimester in pregnancy): yellow dock and dandelion root
- Herbal tea 1-3 cups per day: nettles, raspberry leaf, red clover
- Supplemental iron as directed by your birth attendant



Liver support

- Adequate protein
- B vitamins (may need to be activated, see blog <http://keto-cleanse.com/b-vitamins-methylation-genes/>)
- Sulfur foods: onion, garlic, cruciferous veggies, coconut, arugula
- Tea: dandelion root, milk thistle, fenugreek, fennel, burdock root, coriander, licorice root, Schisandra
- Fiber: chlorella, chia seeds or powder



Depuration

“The process of removing toxins from your body”

- Touch and body work
- Foods
- Hydrotherapy
- Homeopathy
- Tea and glycerite herbal extractions



Touch

- Hugs
- Baby wearing
- Massage
- Cranio sacral
- Acupuncture/acupressure



Foods

- Bitter greens, caution juicing can be too strong and may increase exposure to toxic metals
- Onions, garlic, brassica, cruciferous
- Soups with rosemary, thyme, oregano, ginger
- Spices: cinnamon, cardamom, nutmeg
- Tea: chamomile, dandelion leaf and root, licorice, throat coat



Hydrotherapy

- Clay bath
- Epsom salt bath
- Vinegar bath (from glass container)
- Herbal bath: lavender, comfrey, chamomile, lemon grass, rosemary, rose petals
- Sauna



Probiotics

- Protective barrier in the mucus membrane
- Program our immune system
- Break to toxic compounds
- Crowd out toxin producing bad bacteria and yeast



The Down Side of the Sweet Treat

- Sugar coats white blood cells for several hours, putting them out of commission
- Can cause rapid flux of blood sugar. The adrenal glands are stressed by managing this flux and cause a person to be more susceptible to stress.
- Keeps us from eating phytonutrient rich foods



Treatment for Different Ages

- All the recommendations for avoidance applies to everyone
- All the foods and spices can be for anyone. Pregnant mom's should listen to their intuition
- All the hydrotherapy is fine for any age. Pregnant women and children should avoid a really hot bath
- Pregnant women should avoid cold therapy to feet
- Everything else is as follows



Preconception

- Preconception is the time period before actively attempting to conceive.
- If you want to get pregnant in the near future and have been or will be exposed to smoke and dust from the fire, I recommend seeking preconception care.
- Depending on your circumstances, preconception care takes 4-12 months or longer.
- If you are actively trying to conceive, stick to foods, teas, and prenatal vitamins.



Preconception

Note: Preconception is the *MOST* vulnerable window for the health of a baby and pregnancy.



First Trimester Pregnancy

- Limit herbal remedies in the first trimester to a cup of herbal tea
- Limit antioxidants to what is in a high quality prenatal vitamin
- 2000-4000IU high quality fish oil
- Iron and b vitamin supplement as needed
- Fiber: chlorella, chia seeds, flax seeds
- Probiotic: broad spectrum



Second Trimester Pregnancy

- Limit herbal remedies in the second trimester to 1-3 cups of herbal tea
- Limit antioxidants to what is in a high quality prenatal vitamin plus up to 3000mg vitamin C for and 200mcg selenium
- 2000-4000IU high quality fish oil
- Iron and b vitamin supplement as needed
- Fiber: chlorella, chia seeds, flax seeds
- Probiotic: broad spectrum



Third Trimester Pregnancy

- Herbal remedies can be used more freely in the third trimester under the supervision of a knowledgeable provider
- Limit antioxidants to what is in a high quality prenatal vitamin plus up to 3000mg vitamin C and 200 mcg selenium
- 2000-4000IU high quality fish oil
- Iron and b vitamin supplement as needed
- Fiber: chlorella, chia seeds, fax seeds
- Probiotic: broad spectrum



Pregnancy Note

- Naturopaths, herbalists, acupuncturists and other trained medical providers may prescribe stronger herbs and formulations to patients they are working with when they deem it is indicated.



Nursing Mom-Infant Pair

- Treat baby with herbals through mom using 1-3 cups tea per day. Tinctures may also be indicated when recommended by healthcare provider.
- Antioxidants postpartum vitamin plus up to 3000mg vitamin C and 200mcg selenium
- 2000-4000IU high quality fish oil
- Iron and b vitamin supplement as needed
- Fiber: chlorella, chia seeds, fax seeds



Nursing Mom-Infant Pair

- Probiotic: broad spectrum mom
- Probiotic: bifidobacter lactobacillus combo for baby
- If you have been exposed to significant toxins from the fire, limit weight loss to decrease amount of fat-soluble chemicals in breast milk.



Nursing Toddler Eating Solids

- Babies who are eating solid foods can take all herbs discussed directly in tea or tea popsicle
- Antioxidants: liquid multi vitamin
- 2000-4000IU high quality fish oil
- Probiotic: bifidobacter lactobacillus combo



Preschooler

- All herbs discussed directly in tea or tea popsicle, glycerite form may be used when indicated and for children over two
- Other stronger herbs may also be prescribed by a health care provider
- Antioxidants high quality child multi vitamin plus 500-1500mg vitamin C depending on size
- 1000-1500 IU high quality fish oil
- Probiotic: broad spectrum



Age Two On

- At age two, children's livers have the capacity to detox compounds
- A gentle cleanse can be done with supervision
- Homeopathic drainage is a powerful tool for this age group



Contact and More Info

- BonnieND.com

Pediatric and family medicine

- Keto-Cleanse.com

Detox, weight loss, chronic disease treatment



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