

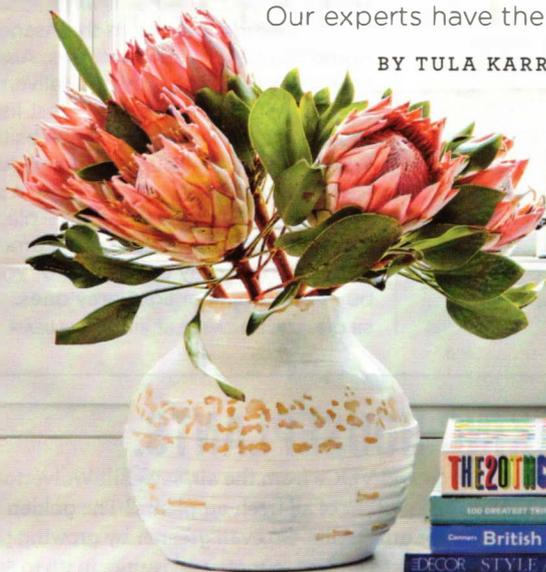
GH INSTITUTE

SPECIAL
REPORT

THE AIR IN YOUR HOME

Get this: Indoor air can have levels of some pollutants up to five times higher than outdoor air, reports the Environmental Protection Agency. So what are the culprits, and what can you do?! Our experts have the lowdown...

BY TULA KARRAS



1

OPEN A WINDOW.

Sure, you don't want your heating or cooling bill to go through the roof, but keeping your home airtight can lock in irritants, says GH Cleaning Lab Director Carolyn Forté. To help, open windows on nice days. Crack one as you make dinner to dilute cooking pollutants, and create a stronger cross draft by opening windows on opposite sides of the room.



2

SWAP THE DUSTER FOR A MICROFIBER CLOTH.

Instead of sending particles into the air with a feather duster, use a microfiber cloth like our Lab go-to, **E-Cloth**: Its ultrafine fibers trap and hold dirt. Other dynamic dusters include GH Seal star **Swiffer** disposable cloths and dusters, which use an electrostatic charge to capture particles.

GH LAB PICK: E-CLOTH MICROFIBER CLEANING CLOTHS, FROM \$8, E.CLOTH.COM

3

LOSE THE LAMINATE.

Installing new floors? Opt for prefinished solid wood or tile. Laminate is a potential source of formaldehyde (which may increase cancer risk if a person is exposed to very high levels) and other volatile organic compounds (VOCs), all of which off-gas and can irritate airways and increase allergy symptoms.



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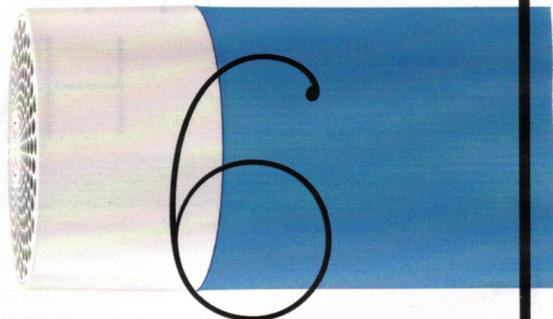
CHOOSE SPRAY BOTTLES.

Some aerosol cleaners, personal care products and deodorizers use VOCs (e.g., butane, propane, isobutane) as propellants to release what's inside. If you're concerned, skip aerosols in favor of pump and trigger sprays, or opt for an alternate form like a solid or a roll-on. For more info on specific ingredients, check company websites or resources like Environmental Working Group's Skin Deep (ewg.org/skindeep) and UL's healthy product scoring tool, goodguide.com, which rates ingredients by their health hazards.

5 RETHINK YOUR VACUUM.

Buy one that's sealed and has a bag. They're best at trapping dust instead of sending it back into the air. Look for one with a high-efficiency particulate air (HEPA) filter to remove at least 99.97% of ultras-small particles that can cause health problems. Our Cleaning Lab likes ones from GH Seal star **Miele**. In tests, the vacuums clean like a dream and capture dust and dirt particles.

GH SEAL STAR: MIELE FRESH AIR UPRIGHT VACUUM CLEANER, \$549, MIELEUSA.COM



CLEAR THE AIR — LITERALLY.

Nab dust, pollen and smoke from cooking or candles with an air purifier that has an AHAM Verifide mark from the Association of Home Appliance Manufacturers. Also make sure it has the right clean air delivery rate (CADR) for your room size (most list square footage on packaging or the website). Our engineers like the **Blue by Blueair** (shown above) product line, which draws in air from all sides. Each is easy to set up—place in the room, plug in and switch on. It comes with blue and dark gray prefilters, but you can buy yellow, pink or light gray ones.

GH LAB PICK: BLUEAIR BLUE 411, \$100, BLUEAIR.COM



7 ADOPT HARDWORKING HOUSEPLANTS.

Certain plants are champs at filtering formaldehyde and VOCs from the air, says Bill Wolverton, Ph.D., who has studied plant filtration for NASA. The mother of all fresh-air plants? The golden pothos, which thrives indoors in a hanging basket, in a pot or on a trellis. Go even greener by growing plants in pebbles or using a hydroculture method, which “increases airflow to roots and results in up to 50% more formaldehyde reduction than from potted plants,” says Wolverton. Super air-filtering plants that are hydro-friendly include palms, rubber plants, peace lilies and *Alii ficuses* (they all grow well in soil too).

GH LAB PICK: DELRAY PLANTS GOLDEN POTHOS, \$18 FOR A 6-INCH POT, HOMEDEPOT.COM

Cloths: Danielle Occhiogrosso Daily. Prop styling: Mlako Karoh.



SEAL OFF ALLERGENS.

The right mattress and pillow covers not only prevent dust, pollen, pet dander and mites from settling into bedding, but also keep anything already trapped there from escaping into the air.

GH SEAL STAR: ALLEREASE MAXIMUM PILLOW PROTECTORS, FROM \$8, AND MATTRESS PROTECTORS, FROM \$30, ALLER-EASE.COM



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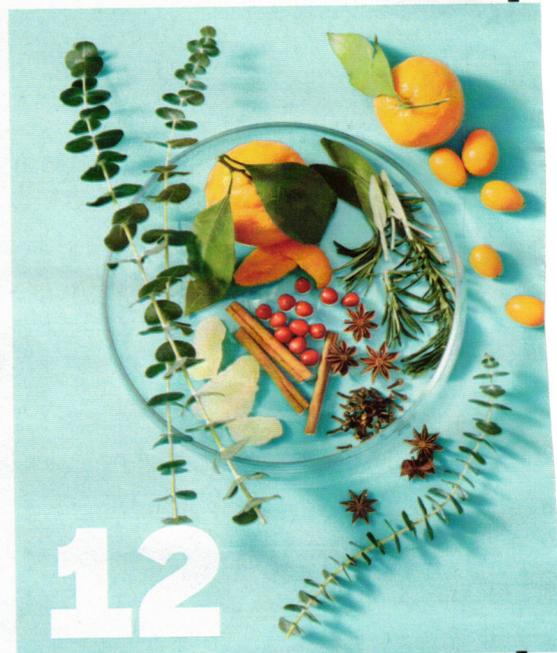
MONITOR HUMIDITY.

Mold thrives in damp basements and bathrooms and can trigger breathing issues. Avoid problems by running the fan or opening a window when showering—and watching your home's humidity (30% to 40% is ideal). If it's over 40%, consider a dehumidifier, says Jen King of the American Council for an Energy-Efficient Economy.

GH LAB PICK: FRIGIDAIRE 70-PINT CAPACITY DEHUMIDIFIER, \$319, FRIGIDAIRE.COM

11 AVOID FLAME RETARDANTS.

Potentially dangerous chemicals in some flame retardants (used in upholstered furniture) end up in household dust. Exposure to these chemicals can lead to infertility and to lower IQ in kids. The good news: California's 2014 law made it easier for non-treated foam to meet flammability requirements, and many manufacturers no longer use chemicals. The best ways to protect yourself? Check the label to confirm that new pieces don't contain flame retardants and be sure not to let dust build up.



COOK UP A HOME FRAGRANCE.

"Some scented products contain chemicals that can cause or aggravate asthma and allergies," says Bill Pease, Ph.D., chief scientist at UL. For a natural Home Care Lab-approved alternative, turn to your spice rack or herb garden. Simmer citrus peels and cinnamon on the stove or arrange fresh herbs (mint, rosemary, lavender) in vases.

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TRY A SCENT-FREE DETERGENT.

Your clean laundry may have a dirty little secret. A University of Melbourne researcher studied chemicals coming out of a dryer vent after clothes were cleaned with fragranced detergent and dryer sheets and found dozens of VOCs, including hazardous pollutants. If anyone in the family is sensitive to scent, consider a product without fragrance.

GH SEAL STAR: TIDE FREE & GENTLE, \$11 FOR 100 OZ, TIDE.COM



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GET YOUR HOME TESTED FOR RADON.

Nearly one in every 15 homes in the U.S. is estimated to have elevated radon levels, says the EPA. Radon, a naturally occurring invisible and odorless radioactive gas—the leading cause of cancer in nonsmokers—travels up through ground soil into your home's air. It's not always limited to any particular geographic area, so even if your neighbor's radon level is low, that doesn't mean your home is clear. All homes should be tested for radon at least once. You can purchase a testing kit online or at a home-improvement store (short-term ones start at \$10) or hire a certified radon professional to administer tests.



14-19 COOK CLEANER!

RUN YOUR RANGE HOOD...

"Every time you cook, ultrafine particles, among other pollutants, are created," says Brett Singer, a scientist at the Lawrence Berkeley National Laboratory who has studied pollutants from cooking and how to reduce the hazard. Help get rid of them by turning on a vent hood fan that exhausts to the outside.

...AND KEEP IT RUNNING.

Switch it on before preheating the oven or firing up the burners, and leave it running for a few minutes after you're done.

CONSIDER AN ELECTRIC COOKTOP.

Gas burners emit nitrogen dioxide that can exceed the EPA's clean-air standards when you cook a lot and don't ventilate.

PUT IT ON THE BACK BURNER.

Tests done by the Berkeley Laboratory found that pollutants were extracted from the air at a higher rate by exhaust fans when food was cooked on back burners.

HEAT ON MEDIUM.

Cooking at high temps creates more air pollutants, so opt for medium- or low-heat techniques such as slow-cooking, baking, simmering and steaming on low.

AVOID FRYING FOODS.

Steaming, boiling, microwaving and sautéing at low heat instead of frying not only are beneficial for your heart health but also produce fewer particles that can get into the air than frying at high heat does.



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WASH BEFORE YOU WEAR.

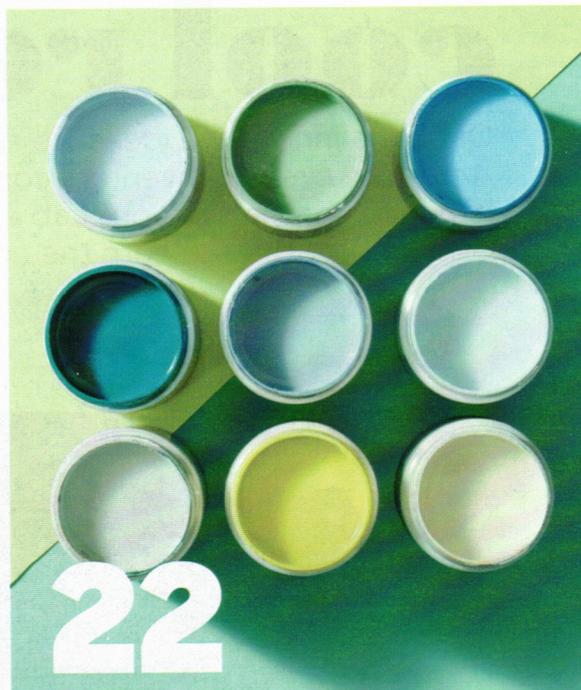
If your new shirt is made from wrinkle-free fabric, it may contain a low level of formaldehyde. Most people are not bothered at this level, but if you have sensitive skin, give it a spin in the machine before you wear it.



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GAUGE THE GLUE.

Some cabinetry and pressed-wood furniture may be made with glue that has formaldehyde, though it's used less thanks to a 2008 California rule. Renovating? Look for labels from the California Air Resources Board (CARB Phase 2 Compliant) and UL (Greenguard Certified) and a planned one from the EPA. They mean the materials meet lower-emission standards.



SLAP ON A COAT OF LOW- OR NON-VOC PAINT.

Testing done in the GH Institute's Home Improvement Lab shows that the results you get with these newer formulas are as high-quality as with traditional options. Our experts recommend GH Seal star **Olympic Assure Interior Paint**, a zero-VOC base, low-odor all-in-one paint and primer. It has a lower environmental impact — without sacrificing performance or color selection.

GH SEAL STAR: OLYMPIC ASSURE INTERIOR FLAT PAINT, FROM \$18 FOR ONE GALLON, OLYMPIC.COM



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USE VACUUM ATTACHMENTS.

Any soft surface will collect dust and pollen. Time to whip out your dusting and upholstery brushes and crevice tools to suck up dust from couch cushions, drapes and other items you can't pop into the washing machine.

