



HEALTHY HOMES MARKETING IN THE COVID-19 ERA

Peter Troast, Founder & CEO, Energy Circle

IAQ & Energy Conference

October 27, 2020

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Building Performance Association
Board Member

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Weekly* Wednesdays 5-5:30 eastern



Energy Circle Sandbox

Marketing & Lead Generation Services for 350+ Better Building Contracting Businesses

HVAC, Home Performance, Solar, Insulation, Auditors/Raters, Builders, Remodelers

**50 States, Canada
& Countless Climate Zones**

**An Inside View of Many Business
Models and Their Success**

Deep Dataset on What is Making the Phone Ring

Our Mantra: More Successful Contractors = More Retrofits

~4 Years of Healthy Home Marketing Experiments

What We'll Discuss

- 1 **The State of the Healthy Homes Opportunity**
- 2 **The Impact (so far) of COVID-19**
- 3 **Foundations of a Healthier Home Business Strategy**
- 4 **Communication Strategies for the Healthier Home Customer Journey—Take Advantage of the Moment**



THE HEALTHY HOMES TREND

(this wave ever gonna break?)

Opinion

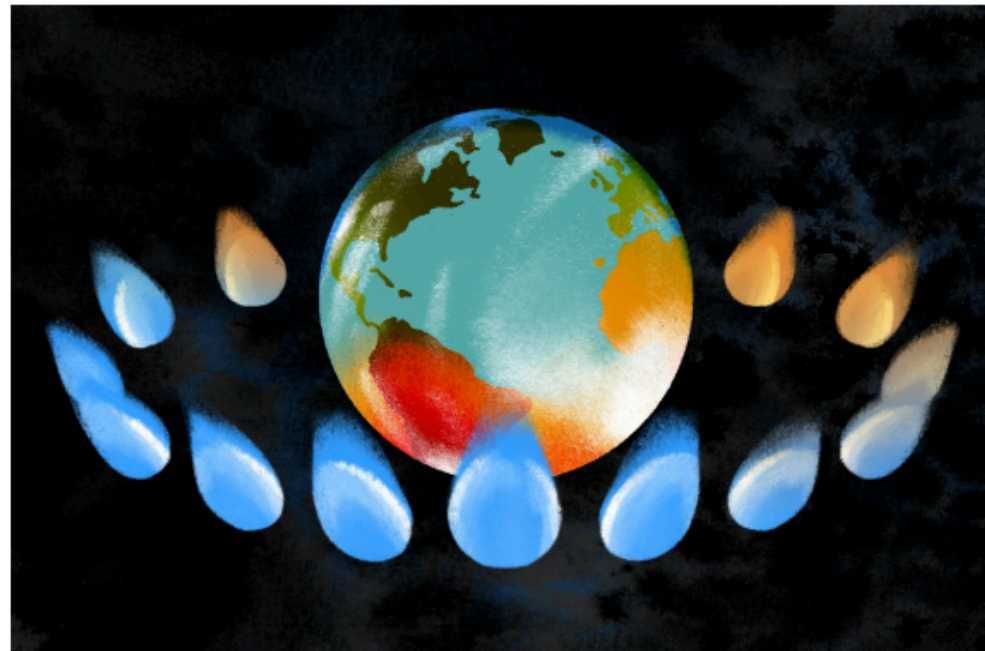
Your Gas Stove Is Bad for You and the Planet

To help solve the climate crisis, we need to electrify everything.

By **Justin Gillis** and **Bruce Nilles**

Mr. Gillis is a former New York Times environmental reporter and a contributing opinion writer. Mr. Nilles is a managing director at Rocky Mountain Institute.

May 1, 2019



Angie Wang

OAKLAND, Calif. — We have some good news that sounds like bad news: Your gas stove has to go.



BEAUTY > HEALTH & FITNESS

Is the Air in Your Home Affecting Your Health? How to Reduce Indoor Pollution

MAY 17, 2016 7:10 PM
by LAURA REGENSDORF



Photographed by Mario Testino, *Vogue*, February 2015



Pollution is increasingly—and rightfully—on people’s minds lately, as seen in the host of new products addressing its negative effects on the skin and the troubling smog levels in cities like Beijing. But only recently did I start thinking more seriously about the air quality inside the home, after a pair of prolific chain-



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What's your
body made for?
#ThisBody

LANE BRYANT



BUT WHO IS WINNING?



BEAUTY > HEALTH & FITNESS

Is the Air in Your Home Affecting Your Health? How to Reduce Indoor Pollution

MAY 17, 2016 7:10 PM
by LAURA REGENSDORF



VOGUE VIP

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members-only program
from Vogue

JOIN NOW

Fortunately for those of us who value space and aesthetics, Dyson has just unveiled a svelte new model, the Dyson Pure Cool Link, equipped with feedback sensors that connect to your smartphone.



Photographed by Mario Testino, *Vogue*, February 2015



LANE BRYANT



Pollution is increasingly—and rightfully—on people's minds lately, as seen in the host of new products addressing its negative effects on the skin and the troubling smog levels in cities like Beijing. But only recently did I start thinking more seriously about the air quality inside the home, after a pair of prolific chain-



\$499

Came for Efficiency. Saved a Kid.

LOVE OUR HOME!!! There just aren't enough good words to express what Energy Docs has done for us! For the first time since owning this home we have a PG&E bill that is less than \$1500, even less than \$300!!! and for the first time in 12 years our son has made it through his first December without a trip to the hospital because our air quality is so much better! This project has improved our lives in more ways than we could have imagined. Thank You So Much

Unlike · Comment · Tuesday at 9:42pm



You like this.

The Chasm





Learning from Mother Google



indoor air q



indoor air **quality**

indoor air **quality testing**

indoor air **quality monitor**

indoor air **quality association**

Press Enter to search.

● **healthy home**
Search term

+ Compare

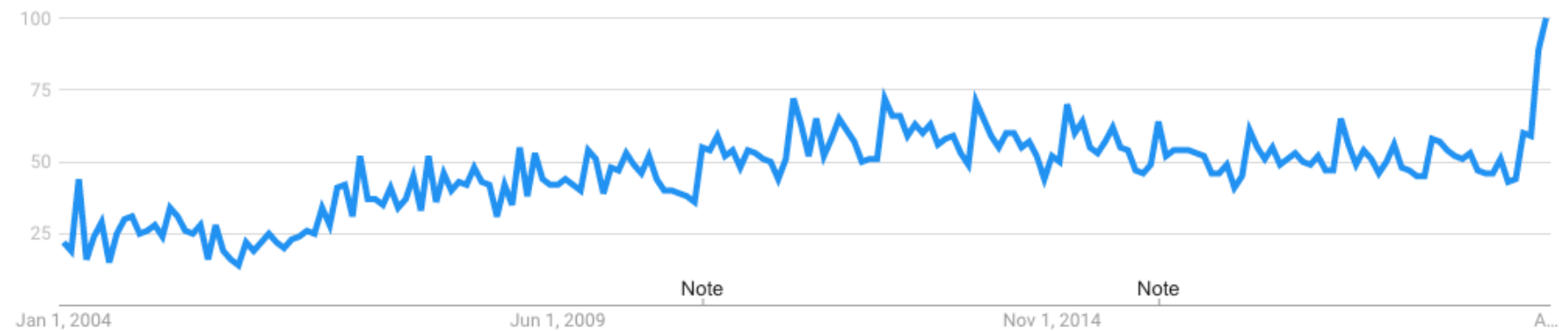
United States ▼

2004 - present ▼

All categories ▼

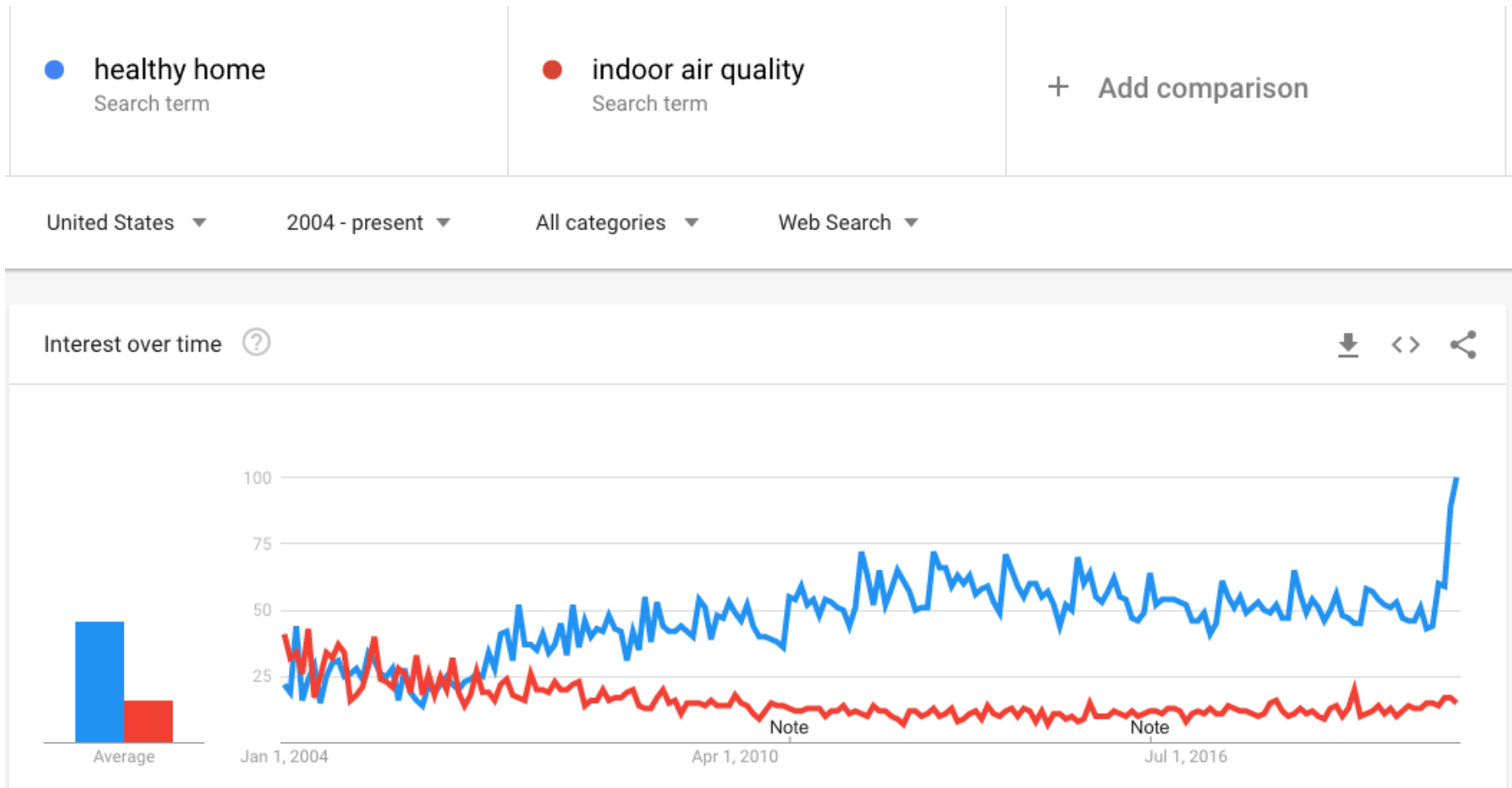
Web Search ▼

Interest over time ?



Google Trends, April 21, 2020

Healthy Home vs IAQ



Google Trends, April 21, 2020

RESEARCH BRIEF

IMPROVING
AMERICA'S HOUSING

Healthy Home Remodeling: Consumer Trends and Contractor Preparedness

JANUARY 2019 | ELIZABETH LA JEUNESSE

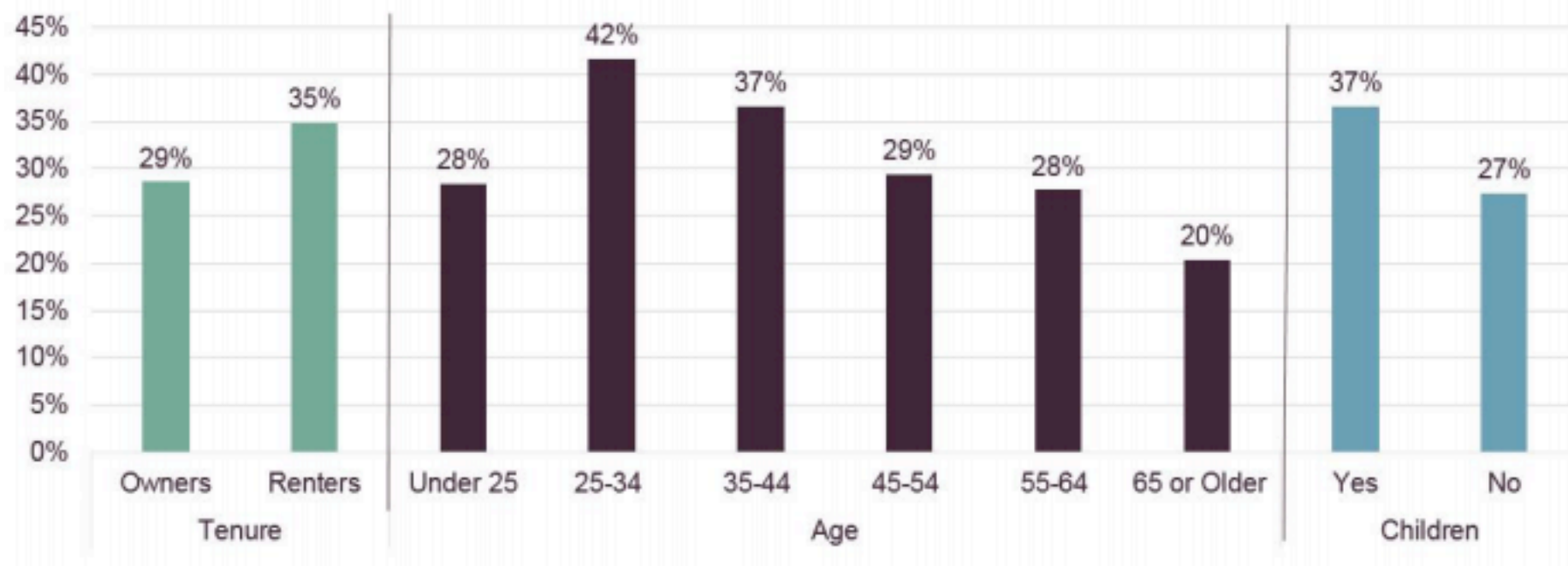


JCHS  JOINT CENTER FOR
HOUSING STUDIES
OF HARVARD UNIVERSITY

n = 2469
Summer 2018

FIGURE 2: HEALTHY HOUSING CONCERNS HIGHEST AMONG RENTERS, MILLENNIALS, FAMILIES WITH CHILDREN

SHARE OF HOUSEHOLDS EXPRESSING SPECIFIC CONCERNS ABOUT THEIR HOME POSING A HEALTH ISSUE AND/OR RISK

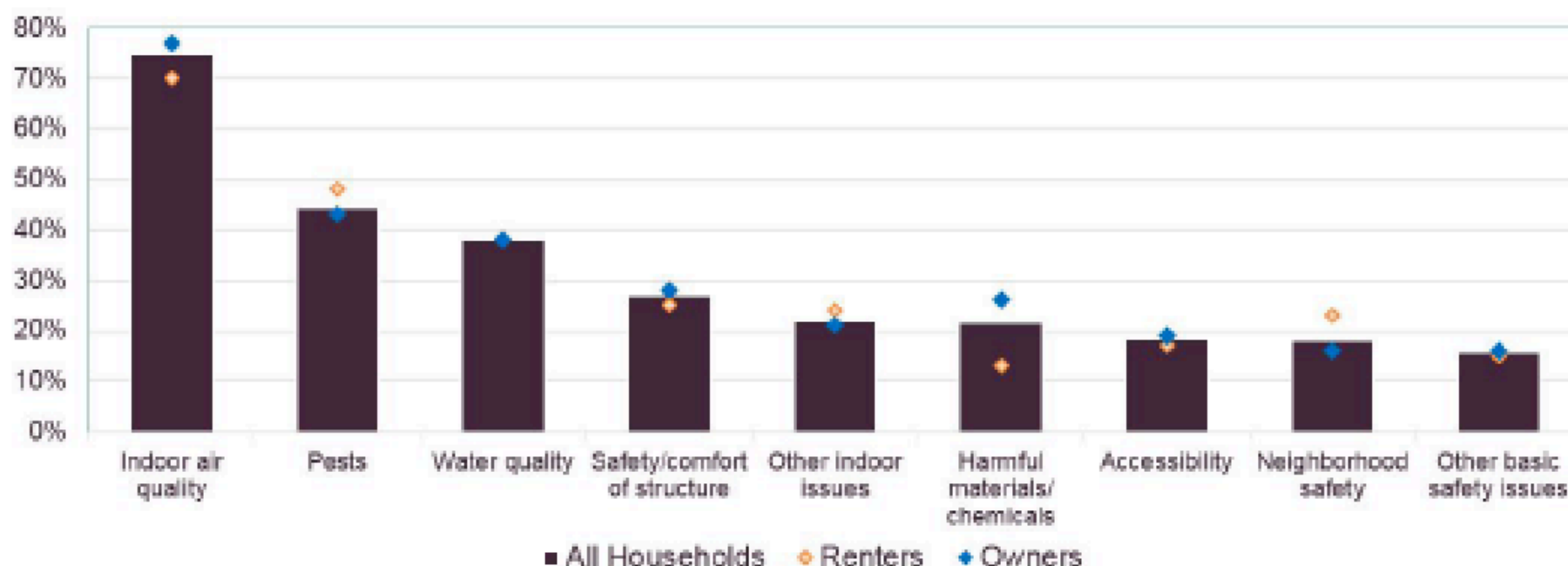


Note: Out of a sample of 1,751 homeowners and 718 renters.

Source: Farnsworth Group and Joint Center Healthy Homes Surveys, August 2018.

FIGURE 4: INDOOR AIR QUALITY, PESTS, AND WATER QUALITY ISSUES TOP LIST OF CONCERNS ABOUT THE IMPACT OF HOME ON HEALTH

WHICH CATEGORY OR CATEGORIES BEST DESCRIBE YOUR CONCERN ABOUT THE IMPACT OF YOUR HOME ON YOUR HOUSEHOLD'S HEALTH?



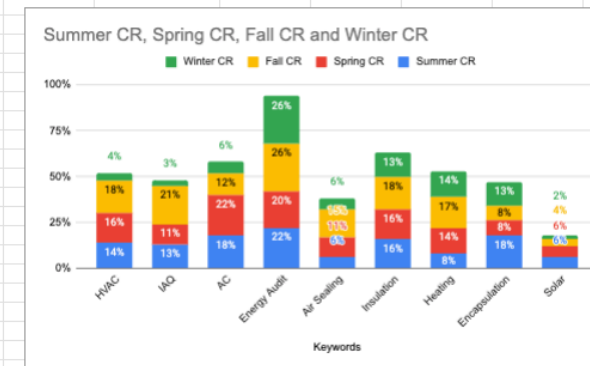
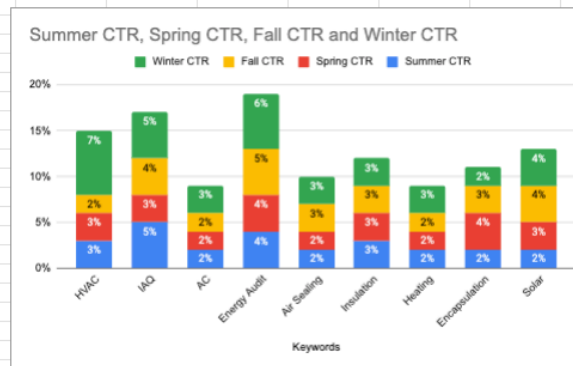
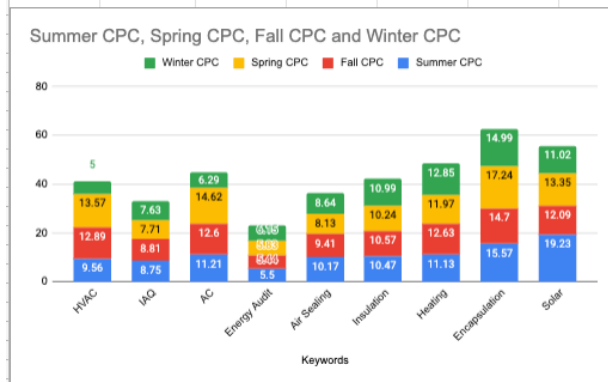
Note: Out of a sample of 501 homeowners and 250 renters concerned about specific healthy housing issues.
Source: Farnsworth Group and Joint Center Healthy Homes Surveys, August 2018.

Energy Circle Google Ads Dataset

Keywords	Summer CPC	Fall CPC	Spring CPC	Winter CPC	Average
HVAC	9.56	12.89	13.57	5	10.26
IAQ	8.75	8.81	7.71	7.63	8.23
AC	11.21	12.6	14.62	6.29	11.18
Energy Audit	5.5	5.44	5.83	6.15	5.73
Air Sealing	10.17	9.41	8.13	8.64	9.09
Insulation	10.47	10.57	10.24	10.99	10.57
Heating	11.13	12.63	11.97	12.85	12.15
Encapsulation	15.57	14.7	17.24	14.99	15.63
Solar	19.23	12.09	13.35	11.02	13.92

Keywords	Summer CTR	Spring CTR	Fall CTR	Winter CTR
HVAC	3%	3%	2%	7%
IAQ	5%	3%	4%	5%
AC	2%	2%	2%	3%
Energy Audit	4%	4%	5%	6%
Air Sealing	2%	2%	3%	3%
Insulation	3%	3%	3%	3%
Heating	2%	2%	2%	3%
Encapsulation	2%	4%	3%	2%
Solar	2%	3%	4%	4%

Keywords	Summer CR	Spring CR	Fall CR	Winter CR
HVAC	14%	16%	18%	4%
IAQ	13%	11%	21%	3%
AC	18%	22%	12%	6%
Energy Audit	22%	20%	26%	26%
Air Sealing	6%	11%	15%	6%
Insulation	16%	16%	18%	13%
Heating	8%	14%	17%	14%
Encapsulation	18%	8%	8%	13%
Solar	6%	6%	4%	2%



~\$250,000 per month for 8 years
125,000 keywords
Major regions of US

Healthy Home Marketing 101

1

**NOBODY
CONNECTS HEALTH
ISSUES WITH THEIR
HOME ENVIRONMENT**

Healthy Home Marketing 101

1

**NOBODY
CONNECTS HEALTH
ISSUES WITH THEIR
HOME ENVIRONMENT**

2

**EVERYBODY
WANTS TO FIRST
START WITH A TEST**

The Chasm





WHAT'S HAPPENING SINCE COVID-19?

Air Purification Explodes (Feb to ____)

RISING	
air purifier for viruses	Breakout
best air purifier for viruses	Breakout
medify air purifier	Breakout
rainbow vacuum	Breakout
air purifier mask	650%
ultraviolet air purifier	450%
air purifier necklace	350%
air doctor purifier	350%
winix true hepa air purifier	300%
personal air purifier	250%
air genie air purifier	250%
reme halo air purifier	200%
levoit air purifier filter	200%
ion air purifier	190%
honeywell true hepa air purifier	180%
smart air purifier	170%
hepa filter air purifier	140%
air purifier costco	140%
uv air purifier	140%
levoit air purifier reviews	140%
whole home air purifier	140%
uv light air purifier	140%
iwave air purifier	130%
true hepa air purifier	120%
homedics air purifier	120%

Taken April 20, 2020

RISING	
jade air purifier	Breakout
air purifier for covid	1400%
air purifier covid	550%
oxypure air purifier	500%
trusens air purifier	400%
iwave air purifier	350%
medical grade air purifier	350%
air conditioner	250%
air purifier covid 19	250%
best air purifier 2020	250%
nuwave air purifier	200%
fan and air purifier	200%
silent air purifier	200%
iqair	170%
vollara air purifier	170%
dyson pure cool link, air purifier	160%
air pump	160%
i wave air purifier	150%
iwave-r air purifier	140%
medify air purifier	140%
best bedroom air purifier	130%
holmes air purifier walmart	130%
dyson air purifier costco	130%
desktop air purifier	120%
honeywell air purifier filters	120%

Taken July 14, 2020

RISING	
air purifier covid	Breakout
best air purifier 2020	Breakout
air purifier coronavirus	Breakout
hepa air purifier covid	Breakout
air purifier covid 19	Breakout
best air purifier for covid	Breakout
clarifion air purifier	Breakout
wearable air purifier	Breakout
best air purifier for viruses	Breakout
aurabeat air purifier	Breakout
best hepa air purifier 2020	Breakout
honeywell uv air purifier	Breakout
vremi air purifier	Breakout
best home air purifier 2020	Breakout
mahli air purifier	Breakout
iwave-r air purifier	4400%
azeus air purifier	4250%
colzer air purifier	2900%
oxypure smart air purifier	2900%
lg air purifier mask	2850%
nuwave oxypure smart air purifier	2800%
dyson bp01 pure cool me air purifier	1350%
medi air purifier	1350%
air purifier for viruses	1250%
air purifier with uv light	1200%

Taken Oct 20, 2020



● indoor air quality

Search term

+ Compare

United States ▼

1/1/20 - 10/21/20 ▼

All categories ▼

Web Search ▼

Interest over time ?



Related queries ?

Top ▼



1	indoor air quality testing	100	<div><div></div></div>
2	indoor air quality monitor	80	<div><div></div></div>
3	air quality monitor	79	<div><div></div></div>
4	plants for indoor air quality	46	<div><div></div></div>
5	best indoor air quality monitor	18	<div><div></div></div>

Google Trends, Jan 1 to present

Taken October 20, 2020

● indoor air quality

Search term

+ Compare

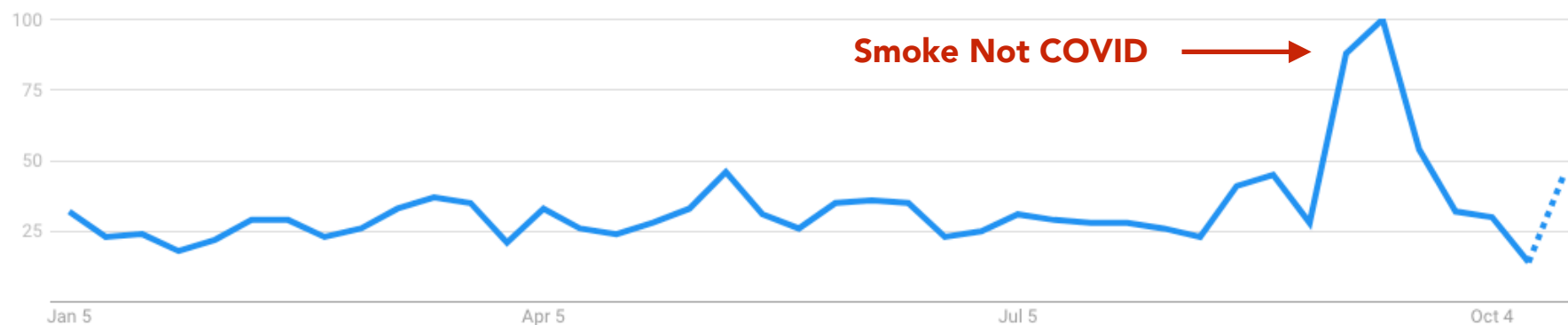
United States ▼

1/1/20 - 10/21/20 ▼

All categories ▼

Web Search ▼

Interest over time ?



Related queries ?

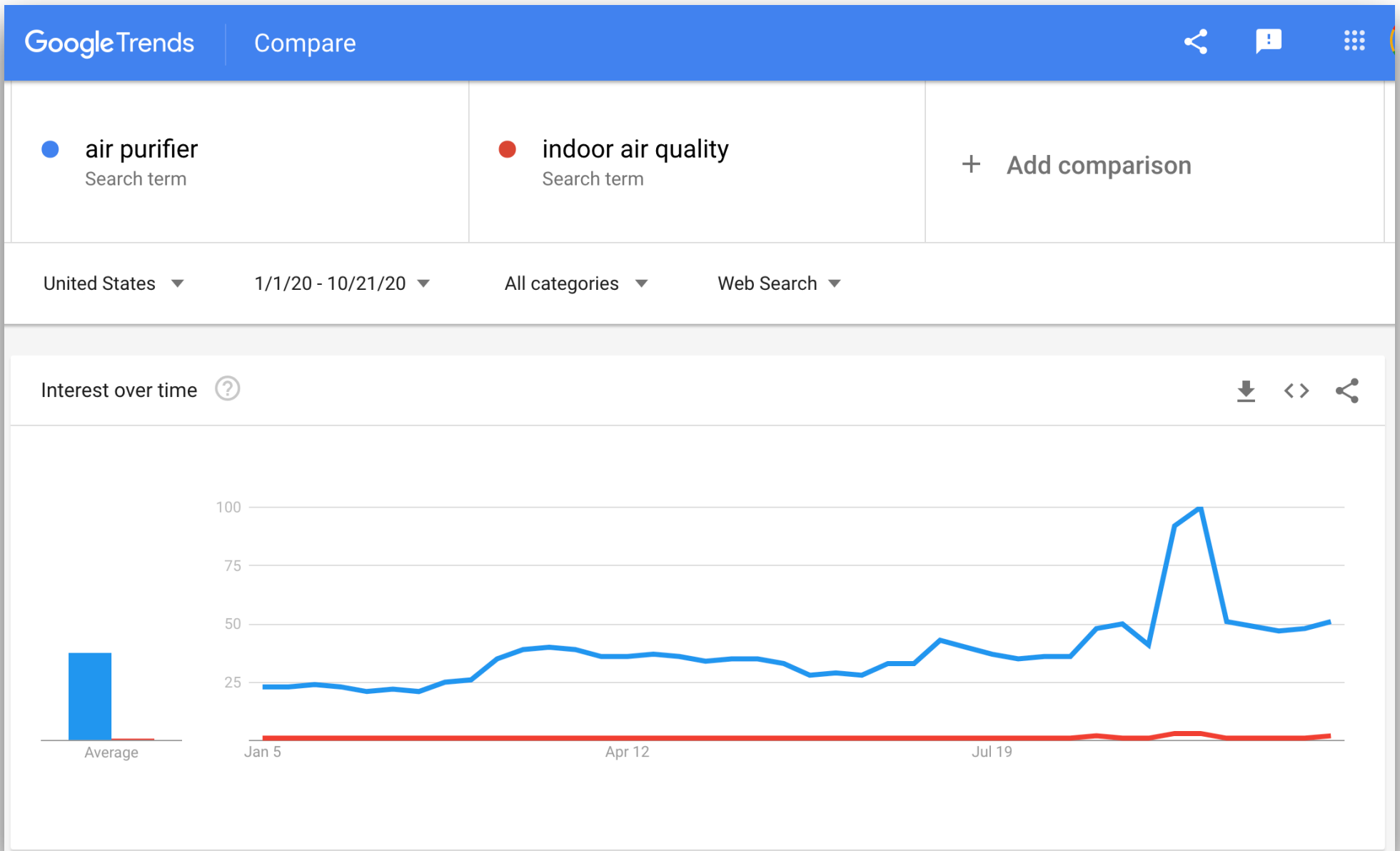
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1	indoor air quality testing	100	<div><div></div></div>
2	indoor air quality monitor	80	<div><div></div></div>
3	air quality monitor	79	<div><div></div></div>
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Google Trends, Jan 1 to present

Taken October 20, 2020



Google Trends, Jan 1 to present
Taken October 20, 2020

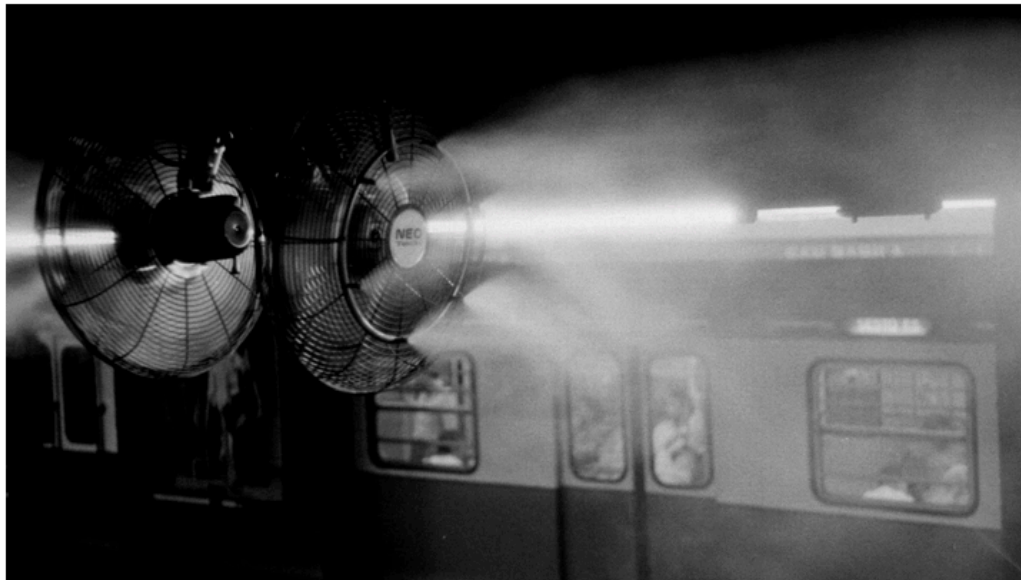
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HEALTH

We Need to Talk About Ventilation

How is it that six months into a respiratory pandemic, we are still doing so little to mitigate airborne transmission?

ZEYNEP TUFEKCI JULY 30, 2020




MILLENNIUM IMAGES / GALLERY STOCK



I recently took a drive-through COVID-19 test at the University of North Carolina. Everything was well organized and efficient: I was swabbed for 15 uncomfortable seconds and sent home with two pages of instructions on what to do if I were to test positive, and what precautions people living with or tending to COVID-19 patients should take. The instructions included many detailed sections devoted to preventing transmission via surfaces, and also went into great detail about laundry, disinfectants,

Ad



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MORE STORIES

Hygiene Theater Is a Huge Waste of Time

DEREK THOMPSON



Deep Clean, Then Clean Again

SARAH ZHANG



Social Distancing Is Not



Ventilation and air filtration play a key role in preventing the spread of COVID-19 indoors

As schools and offices open up, here's what building managers should do to reduce SARS-CoV-2 particles in the air we breathe

Ramon Padilla, USA TODAY

Updated 7:38 p.m. EDT Oct. 19, 2020

As the nation reopens after COVID-19 restrictions, people across the country are making decisions about going back to the office or putting their children back in classrooms. But how can you make the right call? We asked the experts how to improve indoor air quality, and what questions to ask your boss or school administrator.

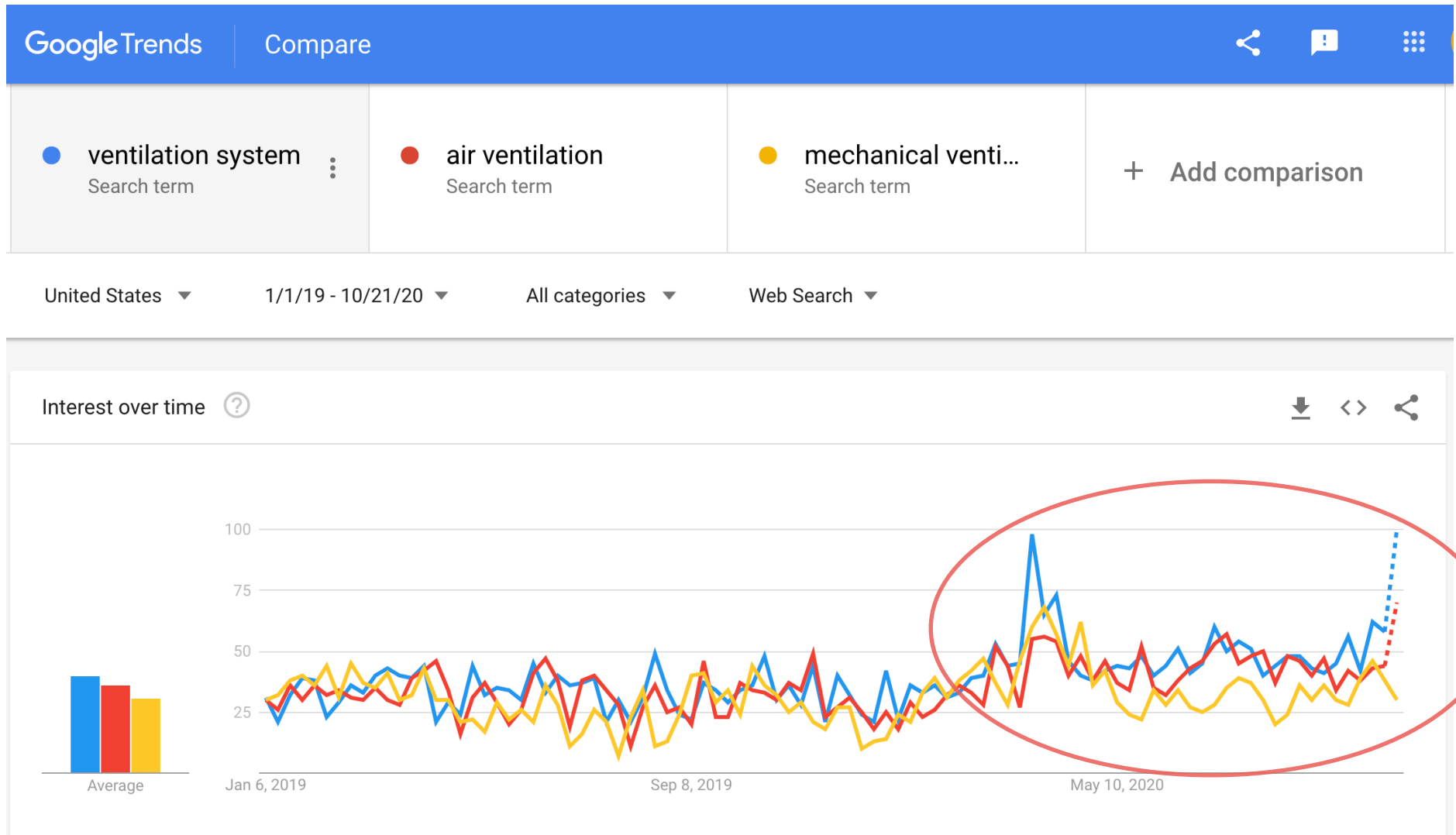
"Often indoors, people are the source of contaminants," says Dr. Shelly Miller, a professor of mechanical engineering at the University of Colorado Boulder.

Your chances of being infected depend on the size of the room and the number of people infected with COVID-19 inside.

"When they talk, talk loudly, when they breathe, small respiratory aerosols are released," Miller said.

If you're in a classroom, office or other enclosed space, these aerosols can build up over time.

Ventilation Rising?



Google Trends, 1/1/19 to present

Taken October 20, 2020

72%

believe their house has a
moderate to strong impact on their health

**Which has often led to
considering upgrades to
ventilation systems**

51%

of consumers say it is
important to upgrade the air
ventilation system in their
homes

Source: *Energy Pulse*™, Shelton Group, 2019

**Suzanne Shelton, EEBA Webinar
April 14, 2020**

My Premise

**Most retrofit ventilation is
sold as a requirement of a
home tightening project**

Who the Heck Knows?

V. Low Ventilation.

Avoid being in large groups of people in spaces with low ventilation. If you have to be in a space with low ventilation, try keeping the windows/doors open or using better filters.

IG: @americaedwards
Twitter: @edwards_america



Observations from Energy Circle Data

- **Shift from Testing to Fixing**

Pre-COVID: Is there something wrong with my home?

Post-COVID: How to make my home more virus safe?

- **Time At Home + Health Concerns = Opportunity**

Work from home trend is permanent

Remodeling & Home Performance sectors are thriving

- **Economic Stress —> Efficiency/Conservation Demand Returning?**

Some initial signs of improvement

- **Tightening Up and Ventilation at Odds?**

Expecting significant confusion

The COVID-era Homeowner Personas



C'mon in Jim

Unperturbed
No outward signs of concern



Cautious Kristina

Expects new protocols
Respects overcommunication
Will put you to the test



Hell No Helen

Nothing is important
enough to let you in
my house



PREPARING FOR THE COVID HEALTHY HOME BOUNCE

Pathway to Meaningful Business

1

**DIAGNOSTIC
PROCESS**

2

**MEASURES WITH
BUSINESS VALUE**

Pathway to Meaningful Business

1 DIAGNOSTIC PROCESS

- Onsite Visual Assessment
- Pressure Test
- CAZ
- IAQ Logging
- *Ventilation Assessment?*

2 MEASURES WITH BUSINESS VALUE

Pathway to Meaningful Business

1 DIAGNOSTIC PROCESS

- Onsite Visual Assessment
- Pressure Test
- CAZ
- IAQ Logging
- *Ventilation Assessment?*

2 MEASURES WITH BUSINESS VALUE

- Whole House Ventilation
- Envelope Control (air leakage)
- Crawlspace Encapsulation
- Duct Cleaning and Sealing
- Moisture Control
- Equipment Replacement



THE HEALTHIER HOME CUSTOMER JOURNEY

Healthier Homes Customer Journey



General Awareness

**IS YOUR HOUSE MAKING
YOU SICK? IS IT HEALTHY?**
Connecting Health Concerns/
COVID Safety with the Home
Environment

**Health & Home
Connection**

WE CAN ANSWER THAT QUESTION
Diagnostic Process/Ventilation Eval
Role of the Building

The Fix


NOT A BAND-AID SOLUTION
Likely a home improvement job
Long term vs short term fix



General Awareness

First: Get Your Content in Order

COVID-19 Statement

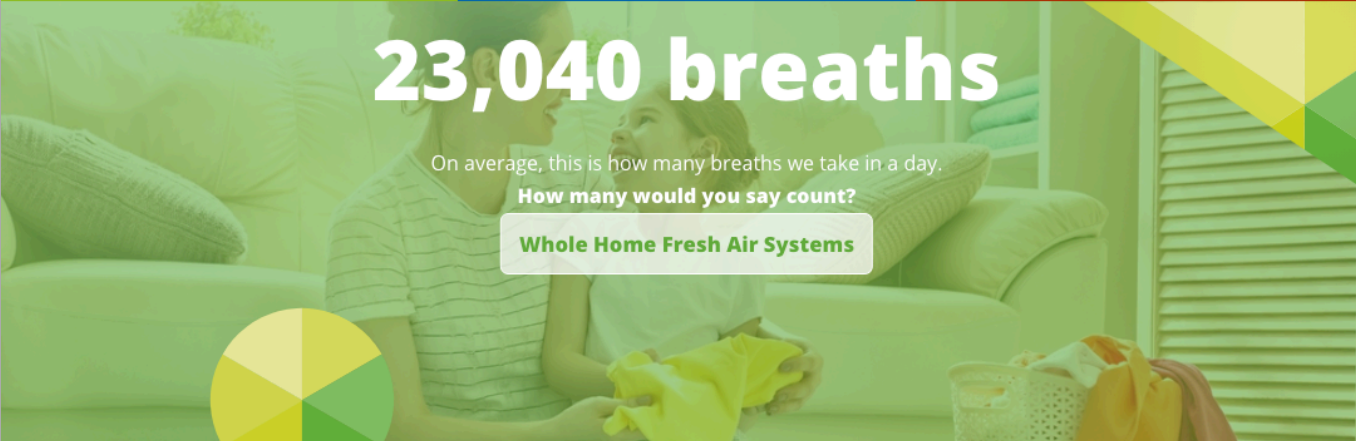
 **Healthy Home™**
Energy & Consulting, Inc.
Transforming your house into an energy-efficient Healthy Home™

[About Us](#) [FAQ](#) [Pearl Certification](#) [Financing](#) [Careers](#) [Refer a Friend](#) [Contact Us](#) [914-371-2792](#)

OUR PROCESS

HEALTHY HOME EVALUATION

WHOLE HOME SOLUTIONS & SERVICES



23,040 breaths


On average, this is how many breaths we take in a day.

How many would you say count?

Whole Home Fresh Air Systems

Wondering how you can breathe clean healthy air in your own home while keeping your living space more comfortable and energy-efficient? You've come to the right place. With a properly installed whole-house ventilation system integrated into your home's heating and cooling system, you can rest easy knowing your indoor air quality is at its absolute best day and night.

As we move closer to understanding the aftermath of the COVID-19 pandemic, parents, teachers, employers, and legislators (just to name a few) are becoming more aware of how viruses and bacteria live within the air we breathe. According to the National Center for Biotechnology Information (NCBI), proper ventilation reduces the concentration of airborne pathogens, and higher ventilation rates can provide a higher dilution capability and consequently potentially reduce the risk of airborne infection.

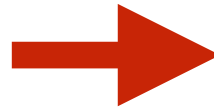


Take a Breath of Fresh Air

If you have been struggling with year-round indoor allergies, unwanted odors, indoor air pollution, or environmental health sensitivities, don't spend another minute breathing the air that could be making you or your family member sick. We may recommend scheduling an [indoor air quality test](#) to better understand the unique challenges your home faces when it comes to keeping pollutants, volatile organic compounds, and allergens out of the air you and your family breathe in over [23,000](#) times a day in your Fairfield, Putnam, or Westchester County home.

Shifting the Narrative (and the Keywords)

HRV/ERV



U.S. DEPARTMENT OF ENERGY Energy Efficiency & Renewable Energy	
Building America Building Science Translator	
Building Science Measure	New Building Science Terminology
Indoor Environment System (cont.)	
Dilution - Whole-House Ventilation	Fresh Air System
Supply-Only Ventilation	Fresh Air Supply System
Exhaust-Only Ventilation	Fresh Air Exhaust System
Balanced Ventilation	Fresh Air Balanced System
Properly Installed Whole-House Ventilation	Professionally-Installed Fresh Air System

February 2015

DOE Home Improvement Expert Program

U.S. DEPARTMENT OF
ENERGY Office of ENERGY EFFICIENCY
& RENEWABLE ENERGY

Home Improvement Expert™ Checklist Balanced HRV/ERV



This U.S. Department of Energy checklist includes important safety and quality installation. All work shall comply with these specific manufacturer installation instructions. The contractor shall check at the bottom to certify the work is completed.

PREPARATION

- ☐ For continuous operation, the target ventilation rate for the home shall be 70 cfm for 1,501 to 2,500 ft², and 100 cfm over 2,500 ft². For intermittent operation, the target ventilation rate shall be 150 cfm for 1,501 to 2,500 ft², and 200 cfm over 2,500 ft². For intermittent operation, the target ventilation rate shall be 150 cfm for 1,501 to 2,500 ft², and 200 cfm over 2,500 ft². For intermittent operation, the target ventilation rate shall be 150 cfm for 1,501 to 2,500 ft², and 200 cfm over 2,500 ft².
- ☐ Appropriate ventilation equipment shall be selected based on the target ventilation rate.

INSTALLATION

- ☐ The ERV/HRV shall either be connected to the central air handler and use the supply ducts. Return air intakes can either be individually ducted from several rooms or the ERV/HRV can use the HVAC system returns. It is recommended that the ERV/HRV be connected to the central system supply side and have one ducted return, or both.
- ☐ An HRV/ERV that is connected to the central system supply side shall have a unit when the ventilator is off. Each occupied room should have one ducted return.
- ☐ Outdoor air shall be filtered with a MERV 11 filter or higher, and the pressure drop of the filter shall be installed to be easily accessible by occupants.
- ☐ The fan shall be oriented so the equivalent length of the duct run is as short as possible, in accordance with ANSI/ACCA Manual D Residential Duct Systems.
- ☐ The exhaust duct outlet vent shall be located on the exterior of the home with a minimum clearance of at least 10 feet from any air inlet.
- ☐ Outdoor air intakes shall be equipped with screens to keep out insects and debris, and prevent water intrusion, and sealed with caulk or spray foam where the edge of the duct meets the exterior wall.
- ☐ All duct seams and connections shall be sealed with mastic or UL 181 tape.
- ☐ Ducts installed outside of the thermal envelope shall be insulated to a minimum of R-6.

COMMISSIONING

- ☐ The ventilation rate shall be measured using a flow hood, flow grid, or anemometer, in accordance with RESNET/ICC 380-2016, to ensure that the fan is providing the minimum ventilation rate.
- ☐ All operation and maintenance procedures shall be reviewed with the homeowner.
- ☐ All operation and maintenance procedures shall be reviewed with the homeowner.

I hereby certify that, to the best of my knowledge and ability, all checked items have been accomplished as part of completion of this home upgrade.

Contractor Signature: _____

Contracting Organization: _____

U.S. DEPARTMENT OF
ENERGY
Office of
ENERGY EFFICIENCY &
RENEWABLE ENERGY

For more resources, visit
basc.pnnl.gov/home-improvement-expert
PNNL-SA-139926 • March 2019

HOME IMPROVEMENT EXPERT

ENCLOSURE UPGRADES

- Attic Air Sealing and Insulation
- Basement Wall Insulation
- Framed Wall Insulation
- Masonry Wall Insulation

Home Air Sealing

- Vented to Unvented Attic
- Vented to Unvented Crawl Space

Window Replacement

HEATING & COOLING

- Air Conditioner Replacement
- Gas Furnace Replacement
- Heat Pump Replacement
- Duct Sealing and Insulation
- Oil or Gas Boiler Replacement

HOT WATER HEATING

- Gas Tank Water Heater
- Gas Tankless Water Heater
- Heat Pump Water Heater

FRESH AIR SYSTEM

- Bathroom Exhaust Fan
- Kitchen Exhaust Fan
- Balanced HRV/ERV
- Balanced Supply plus Exhaust
- Supply Integrated with HVAC

PROPER SEQUENCE

Through the U.S. Department of Energy research program, experts are helping homeowners optimize whole-house energy efficiency and indoor air quality. This checklist includes a recommended sequence of improvements (shown below) to help ensure their upgrade investment is safe, indoor air quality.

STEP 1: ENSURE SAFETY

Have experts assess energy efficiency and identify health, and safety issues.

STEP 2: ENSURE FRESH AIR

Ensure effective ventilation.

STEP 3: ENSURE MOISTURE

Ensure adequate water vapor control and dry by adding insulation.

STEP 4: ENSURE DUCTWORK

Capture air sealing opportunities and ensure insulation is installed.

STEP 5: ENSURE THERMAL ENVELOPE

Insulate at least to the code minimum for your location after quality, and moisture control.

ANYTIME: EQUIPMENT

Replace heating and cooling equipment, windows, appliances, if they fail or become outdated, or to improve energy efficiency.

U.S. DEPARTMENT OF
ENERGY Office of ENERGY EFFICIENCY
& RENEWABLE ENERGY

Home Improvement Expert™ Factsheet Balanced HRV/ERV



WHY HOME IMPROVEMENT EXPERT?

An easy way to get a quality job.

Research findings reveal significantly reduced energy savings and potential performance risks where home improvements are not properly installed. To help homeowners address this challenge, the U.S. Department of Energy has compiled world-class expert guidance from industry leaders and national laboratories in factsheets and checklists under the name **Home Improvement Expert**. Homeowners can leverage these expert recommendations to help ensure quality installation by attaching Home Improvement Expert checklists to vendor contracts and ensuring the vendor completes and signs the checklist before accepting the work.

READY TO DO MORE?

This factsheet and accompanying checklist cover one of more than 20 home improvements covered by the U.S. Department of Energy Home Improvement Expert. Use them to help optimize energy savings and improve performance related to comfort, health, safety, and durability.

To download other checklists: basc.pnnl.gov/home-improvement-expert

For more customized home improvement recommendations:

- Get your **Home Energy Score** from a qualified assessor (www.home-energy-score.gov)
- Schedule an expert assessment through **Home Performance with ENERGY STAR**® (www.energystar.gov/homeperformance).

BENEFITS

Installed correctly, a whole-house fresh air system with heat recovery can help ensure a healthier and more comfortable indoor environment with optimum efficiency.

Contaminants in homes can trigger asthma and allergy attacks as well as other health problems. Whole-house fresh air systems dilute, exhaust, and filter these contaminants. Balanced ventilation systems like heat recovery ventilators (HRVs) and energy recovery ventilators (ERVs) bring in fresh outside air and distribute it throughout the home using either their own dedicated ducts or the home's central heating and cooling system ducts. While bringing in this fresh air, the ERV/HRV exhausts an equal amount of stale air from the home, ensuring balanced pressures throughout the home. The incoming and outgoing air pass through a heat exchanger where heat is transferred from the warmer air stream to the cooler air stream, thus heating incoming air in the winter and cooling incoming air in the summer. An ERV also transfers moisture.

RELATED HOME IMPROVEMENT CONSIDERATIONS

Before purchasing a balanced whole-house fresh air system, consider working with a qualified home energy assessor to evaluate other related home performance needs and opportunities. This includes:

- duct sealing to ensure effective whole-house ventilation when existing heating and cooling ducts are used to distribute fresh air;
- bathroom and kitchen exhaust fans that remove contaminants, moisture, and odors;
- integration of high-capture filters in the heating and cooling system return duct to more effectively remove particulates from the air you breathe.

For more information on ventilation, please search the Building America Solution Center, basc.pnnl.gov.

TIPS FOR HIRING A CONTRACTOR

- Look for licensed, insured, and certified contractors.
- Check references and reviews on home improvement web sites.
- Get multiple bids in writing.
- Check with your utility and state, local, and federal weatherization programs for rebates and incentives.
- Include the Home Improvement Expert™ checklist in bids and contracts to ensure quality installation.
- Consider using a Residential Energy Services Network (RESNET) certified Home Energy Rating System (HERS) rater, Building Performance Institute (BPI) certified Building Analyst, or other qualified professional (e.g., licensed engineer or architect) to inspect the work.

Fear Can Be Good Marketing

Health Symptoms

The symptoms most commonly reported by those affected by a "sick house" are many and varied, depending on the sensitivity of the person and the severity of the issues in the home. These are only a few of the more common symptoms.



EMOTIONAL CHANGES

- Mood changes, feeling agitated or depressed.



RESPIRATORY CHANGES

- Sinus congestion.
- Coughing or shortness of breath.
- Need to increase use of asthma inhaler or other medications.



COGNITIVE CHANGES

- Frequent headaches.
- Foggy thinking, difficult to make decisions.
- Sleep disturbance (can't sleep, can't wake up).
- Short term memory loss.



OTHER PHYSICAL ISSUES

- Stomach discomfort.
- Muscles and joints hurt, making exercise difficult.
- Extreme fatigue, feel weak and lethargic.
- Always feeling sick (too many colds).
- Skin Rashes.
- Night Sweats.
- Heart racing or palpitations.



Is Your House Making You Sick?

Posted on [March 30, 2017](#) by [Dana Sundblad](#)

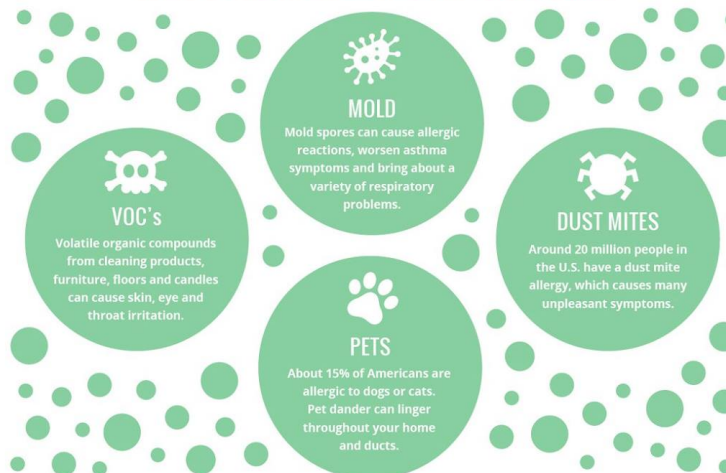
The symptoms most commonly reported by those affected by a "sick house" are many and varied, depending on the sensitivity of the person and the severity of the issues in the home. Common symptoms usually fall into a few broad categories:

- Respiratory Symptoms – congestion, aggravated asthma or allergies, sinus infections
- Cognitive Issues – foggy thinking, sleep disturbance, frequent headaches
- Emotional Changes – feeling agitated or depressed
- Physical Symptoms – stomach discomfort, muscle aches, fatigue, rashes, sore throat

IMPROVE YOUR HOME'S INDOOR AIR QUALITY & AVOID ALLERGIES

Did you know that about half of all allergies are triggered by poor indoor air quality? Reduce allergy and asthma symptoms by improving your home's IAQ.

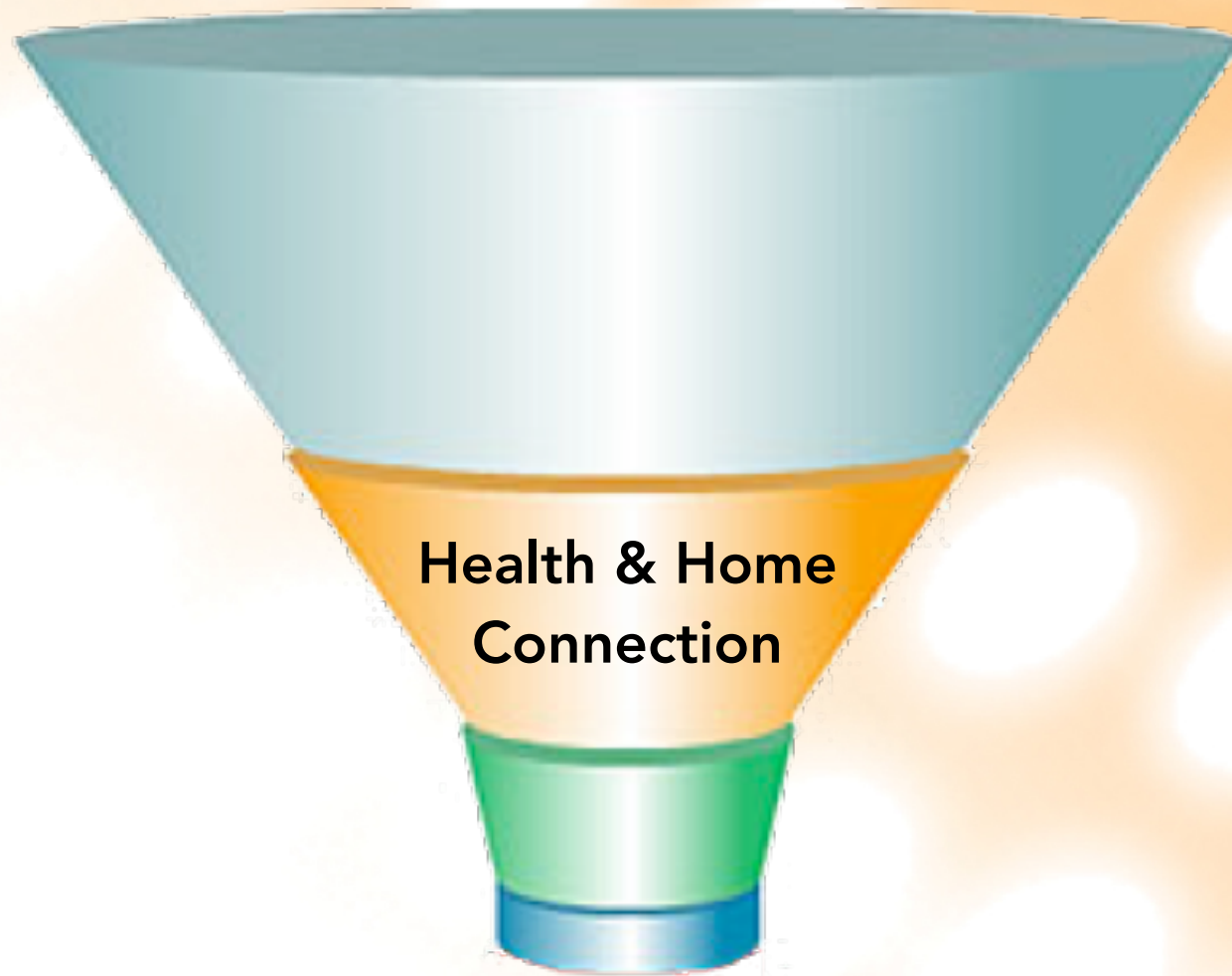
WHAT'S CAUSING ALLERGIES IN YOUR HOME?



WHAT CAN YOU DO TO IMPROVE YOUR HOME'S INDOOR AIR QUALITY?

- 1. VENT EXCESS MOISTURE**
Air sealing and insulation can both help to reduce moisture infiltration.
- 2. REDUCE HUMIDITY LEVELS**
Avoid potential mold growth by keeping your home's humidity levels between 30-50%.
- 3. CLEAN OFTEN**
Wash your bedding and vacuum your carpets on a regular basis to reduce buildup of dust/debris.
- 4. CUT BACK ON CHEMICALS**
Make sure to clean using natural products to avoid introducing dangerous VOCs into your home's air.
- 5. MAINTAIN YOUR HVAC UNITS**
Clean or replace your systems' air filters regularly, and have them serviced at least once a year.
- 6. AIR SEAL**
Air sealing can prevent moisture and other outside pollutants from entering your home.
- 7. INSULATE**
Prevent excess humidity to keep your home healthy and comfortable.

Start breathing healthy air and avoid allergies with help from Energy Smart Home Improvement. Contact us to schedule a consultation for your home today.



Embrace Healthy Homes Principles

- **Minimize indoor emissions.**
- **Keep it dry.**
- **Ventilate well.**
- **Protect against outdoor pollution.**

*William W Nazaroff, PhD
Daniel Tellep Distinguished Professor of Engineering
University of California, Berkeley
Editor, Indoor Air*

BPI Keep It Principles

- **Keep it Clean**
- **Keep it Dry**
- **Keep it Pest-free**
- **Keep it Contaminant-free**
- **Keep it Safe**
- **Keep it Ventilated**
- **Keep it Comfortable**
- **Keep it Maintained**



*Building Performance Institute
Healthy Housing Principles
Reference Guide*

Relevant Content & Messaging

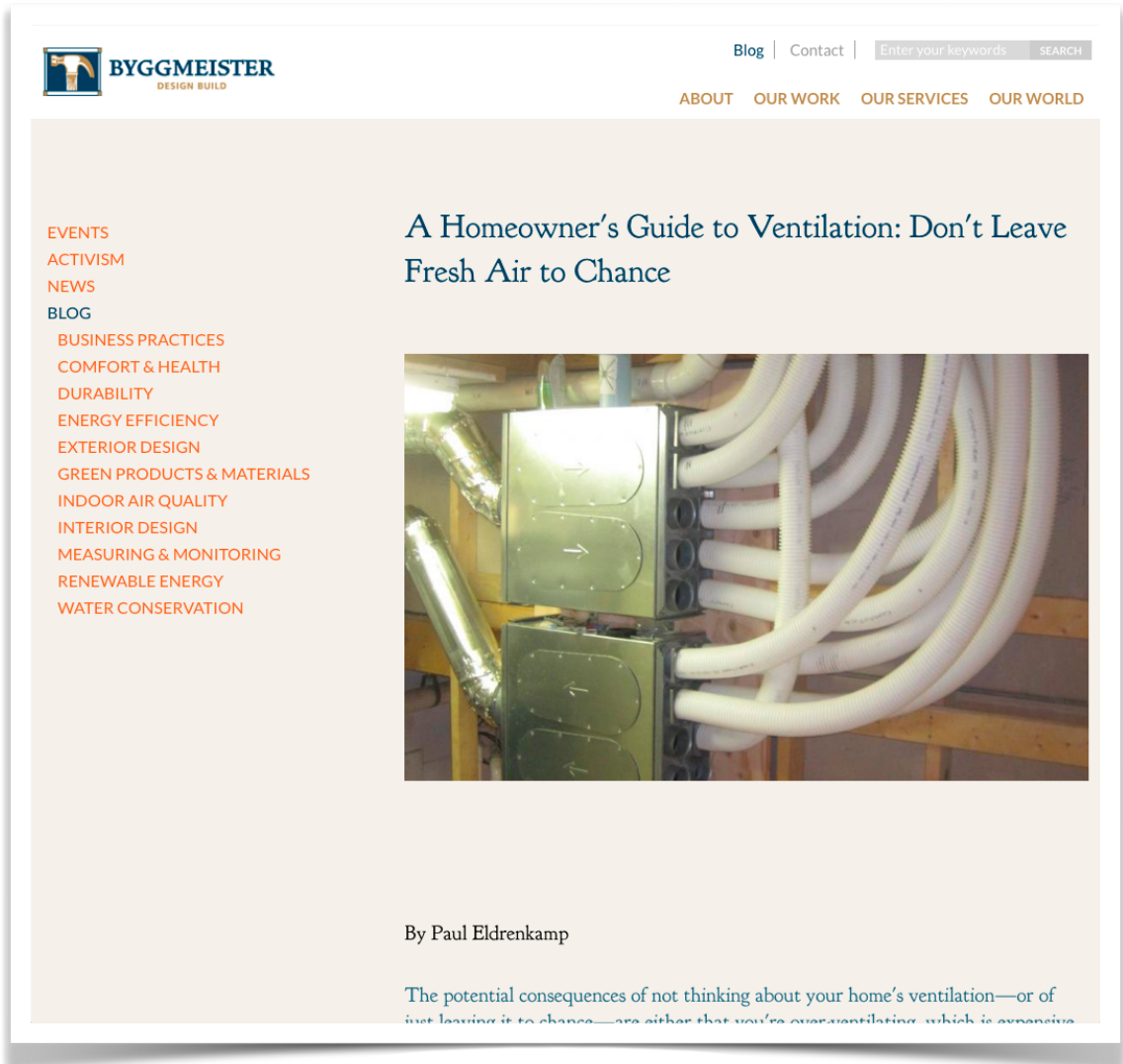
- **Healthy home topics**

The indoor environment
Healthy Home & IAQ
Energy Costs & Clean Air
Comfort
Reliability/Resiliency
Lighting
Acoustics

- **Specific services**

- **Expertise**

- **FRESHNESS!**



The screenshot shows the BYGGMEISTER website. The header includes the logo, navigation links (Blog, Contact, Search), and a menu (ABOUT, OUR WORK, OUR SERVICES, OUR WORLD). A sidebar on the left lists various topics under the heading 'BLOG'. The main content area features a blog post titled 'A Homeowner's Guide to Ventilation: Don't Leave Fresh Air to Chance' by Paul Eldrenkamp. The post includes a photograph of a mechanical ventilation system with white ducts and a green control unit.

BYGGMEISTER
DESIGN BUILD


Blog | Contact | Enter your keywords SEARCH

ABOUT OUR WORK OUR SERVICES OUR WORLD

BLOG

- EVENTS
- ACTIVISM
- NEWS
- BLOG
- BUSINESS PRACTICES
- COMFORT & HEALTH
- DURABILITY
- ENERGY EFFICIENCY
- EXTERIOR DESIGN
- GREEN PRODUCTS & MATERIALS
- INDOOR AIR QUALITY
- INTERIOR DESIGN
- MEASURING & MONITORING
- RENEWABLE ENERGY
- WATER CONSERVATION

A Homeowner's Guide to Ventilation: Don't Leave Fresh Air to Chance



By Paul Eldrenkamp

The potential consequences of not thinking about your home's ventilation—or of just leaving it to chance—are either that you're over-ventilating, which is expensive

Content That Connects Health & Home

- Air Purifiers & COVID-19
- The Air in Your House--Where's it Come From?
- Is Your House Making You Sick?
- The Benefits of a Fresh Air Ventilation System
- Your House, Your Kids and Asthma
- Low Levels of Carbon Monoxide--Are You Safe?
- Pests in Your Walls--Not Just an Annoyance
- Choosing Healthy Materials for Your Home

Getting Found = Having Content

Long From Storytelling: Advanced Landing Pages

[ABOUT](#)
[SERVICES](#)
[INTEGRATED PROJECTS](#)
[RESOURCES](#)
[START YOUR PROJECT](#)

Whole Home Solutions

At E3 INNOVATE, we believe a house should be a safe, clean and comfortable home for its residents. That's why we help families create high performance homes and ensure they're clean, protect their most treasured investment for generations.

[Learn More](#)

Ensure your home is comfortable, healthy, durable, and sustainable

with Whole Home Solutions from the Experts at E3.

(615) 667-8453

[Get a Quote](#)

Whole Home Solutions means taking an Integrated Approach to Home Improvement

Whether you are making upgrades to an existing home, planning a new construction project, or remodeling an existing house, E3 provides the expertise to help you create healthy, comfortable and efficient spaces that enhance the quality of your life.

Safe indoor air quality, comfort, energy efficiency, and long-term durability are the foundation of a home designed with an integrated approach. E3 can help you create a home that is safe, healthy, and comfortable for you and your family. We'll help you understand the many ways that a home can be made healthier, more comfortable, and more efficient.

There are 5 steps to an integrated whole home approach with your project:

1. **Assessment** - E3 will conduct a thorough assessment of your home to identify areas for improvement.
2. **Design** - E3 will create a custom design plan for your home that addresses all the areas that need improvement.
3. **Construction** - E3 will manage the construction of your home, ensuring that all the work is done to the highest standards.
4. **Verification** - E3 will verify that your home meets all the requirements of the design plan.
5. **Warranty** - E3 will provide a warranty on all the work that has been done.

E3 INNOVATE is a whole-home performance company that focuses on integrated, long-term solutions that serve you and your family.

Is Your House Making Your Family Sick?

Without a whole-home approach, issues can arise that may lead to health concerns, like mold growth, poor ventilation, radon gas infiltration, and poor indoor air quality. Issues like these can affect the health of your entire family. Symptoms may vary from person to person, so it's important to know about the many symptoms associated with poor home health.

Physical Symptoms

- Skin irritation
- Fatigue, weakness & lethargy
- Frequent sickness

Cognitive Symptoms

- Frequent headaches
- Foggy thinking or short term memory loss
- Difficulty sleeping and waking up

Emotional Symptoms

- Mood changes
- Feeling agitated or depressed
- Worry or anxiety

Respiratory Symptoms

- Coughing or shortness of breath
- Sinus congestion
- Increased asthma symptoms

Pets

Pets can be even more sensitive than humans are to household chemicals and allergens

Does This Sound Like You?

I think my house is making me sick.
I get headaches and feel dizzy but it all goes away when I leave the house.

[Learn More >](#)

My hardwood floors are warping.
I have a lot of moisture in my crawlspace from the recent rain and it's messing up my floors!

[Learn More >](#)

The house smells damp and musty.
but I can't figure out where it's coming from or what's causing it

[Learn More >](#)

The house smells damp and musty.
but I can't figure out where it's coming from or what's causing it

[Learn More >](#)

Which Symptoms are you Seeing in Your Home?

The first clue that a home has a performance issue is when symptoms appear. This happens when the house is constructed and maintained with a piecemeal approach.

1. **Excess Dust & Dirt**
 - House looks dingy, even after it's been cleaned
 - Increased allergy symptoms, especially after cleaning
 - Frequent dusting, especially after turning on the heat or AC
2. **Condensation & Mold Growth**
 - Condensation on the inside of windows in the winter
 - Visible mold growth in bathrooms, on window sills, or on registers, etc.
 - Mold stains on bathroom ceilings and above leaky windows & doors
3. **Unpleasant Odors**
 - House smells when you first enter or certain rooms smell
 - Indoor air feels stale
 - Musty or moldy smells you can't get rid of
4. **Humidity Issues**
 - Air feels damp or clammy, even when the air conditioning is running
 - Hardwood floors cup and crack
5. **Temperature Discomfort**
 - House is always too hot or too cold
 - House feels drafty, especially during the winter

Ensure your home is comfortable, healthy, durable, and sustainable

with Whole Home Solutions from the Experts at E3.

(615) 667-8453

[Get a Quote](#)

Common Issues We Solve

Cold or Warped Floors
It's the sign of a water leak and structural damage. We'll find the leak and repair it, and we'll also make sure the floors are properly supported.

Drifts
Our team makes sure your home is properly insulated and sealed to keep the cold air out and the warm air in.

Asthma and Allergies
We can help you reduce the allergens in your home by cleaning the air and making sure the air is clean and fresh.

Outside Noise
We can help you reduce the noise from the outside by installing soundproofing and making sure the house is properly insulated.

High Utility Bills
Review your air conditioning and heating systems and we'll help you reduce your costs.

Pests
We'll make sure your home is properly sealed and insulated to keep the pests out and the air clean and fresh.

Indoor Temperatures
We'll make sure your home is properly insulated and sealed to keep the temperature just the way you like it.

Mold, Rot, and Mildew
We'll make sure your home is properly insulated and sealed to keep the mold, rot, and mildew out and the air clean and fresh.

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[Learn More >](#)

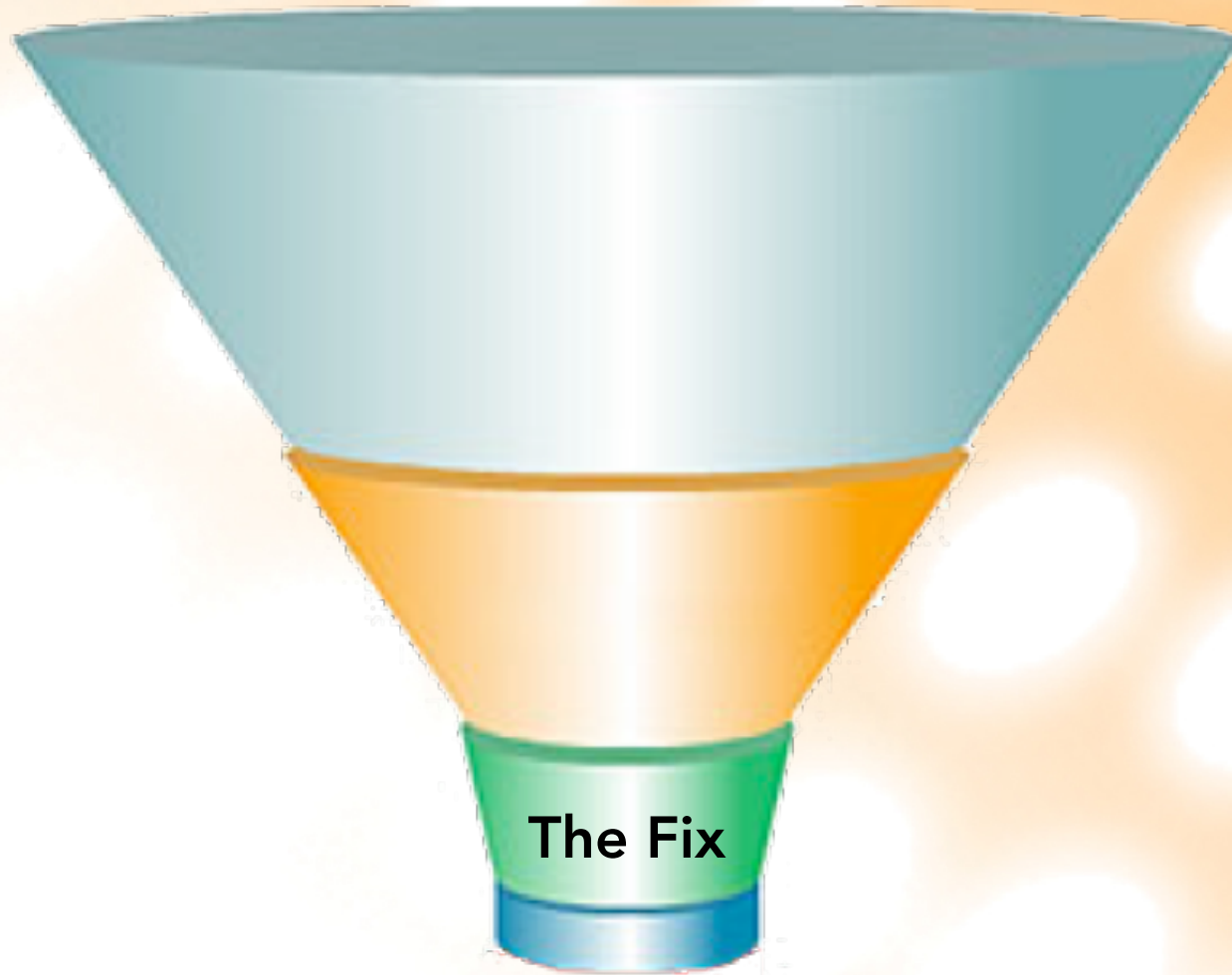
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[Learn More >](#)

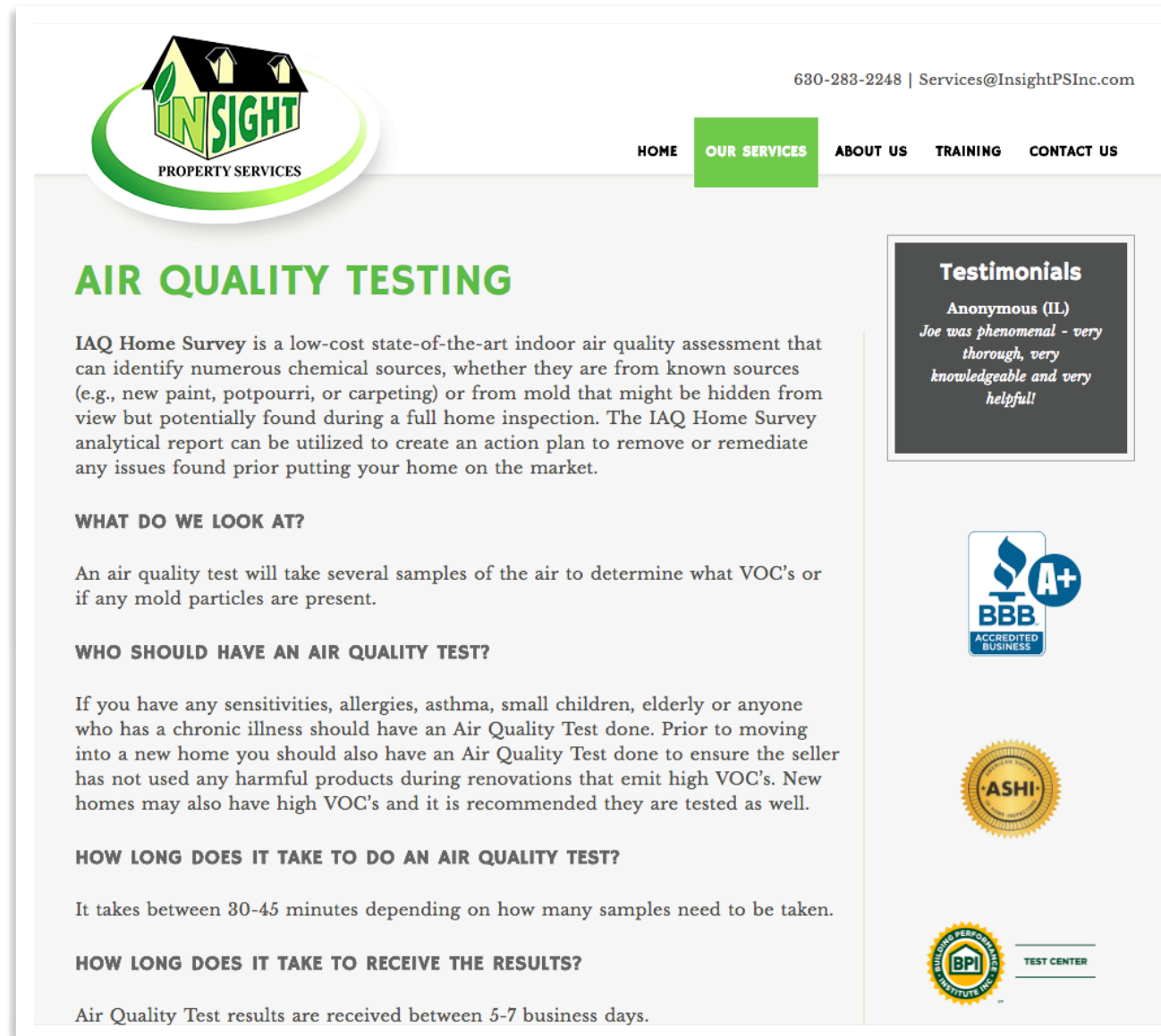
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First: Explain Your Diagnostic Approach



The screenshot displays the Insight Property Services website. The header includes the company logo, a phone number (630-283-2248), an email address (Services@InsightPSInc.com), and a navigation menu with links to HOME, OUR SERVICES (highlighted), ABOUT US, TRAINING, and CONTACT US. The main content area is titled "AIR QUALITY TESTING" and describes the IAQ Home Survey as a low-cost, state-of-the-art indoor air quality assessment. It lists various chemical sources like new paint, potpourri, and carpeting, and mentions that the survey can be used to create an action plan for removing or remediating issues. The page also includes sections for "WHAT DO WE LOOK AT?", "WHO SHOULD HAVE AN AIR QUALITY TEST?", and "HOW LONG DOES IT TAKE TO DO AN AIR QUALITY TEST?". A testimonials box on the right features a quote from an anonymous client in Illinois. At the bottom right, there are three accreditation logos: BBB Accredited Business (A+), ASHI (American Society of Home Inspectors), and BPI (Building Performance Institute) Test Center.

INSIGHT
PROPERTY SERVICES

630-283-2248 | Services@InsightPSInc.com

HOME OUR SERVICES ABOUT US TRAINING CONTACT US

AIR QUALITY TESTING

IAQ Home Survey is a low-cost state-of-the-art indoor air quality assessment that can identify numerous chemical sources, whether they are from known sources (e.g., new paint, potpourri, or carpeting) or from mold that might be hidden from view but potentially found during a full home inspection. The IAQ Home Survey analytical report can be utilized to create an action plan to remove or remediate any issues found prior putting your home on the market.

WHAT DO WE LOOK AT?

An air quality test will take several samples of the air to determine what VOC's or if any mold particles are present.

WHO SHOULD HAVE AN AIR QUALITY TEST?

If you have any sensitivities, allergies, asthma, small children, elderly or anyone who has a chronic illness should have an Air Quality Test done. Prior to moving into a new home you should also have an Air Quality Test done to ensure the seller has not used any harmful products during renovations that emit high VOC's. New homes may also have high VOC's and it is recommended they are tested as well.

HOW LONG DOES IT TAKE TO DO AN AIR QUALITY TEST?

It takes between 30-45 minutes depending on how many samples need to be taken.

HOW LONG DOES IT TAKE TO RECEIVE THE RESULTS?

Air Quality Test results are received between 5-7 business days.

Testimonials

Anonymous (IL)
Joe was phenomenal - very thorough, very knowledgeable and very helpful!

BBB ACCREDITED BUSINESS A+

ASHI

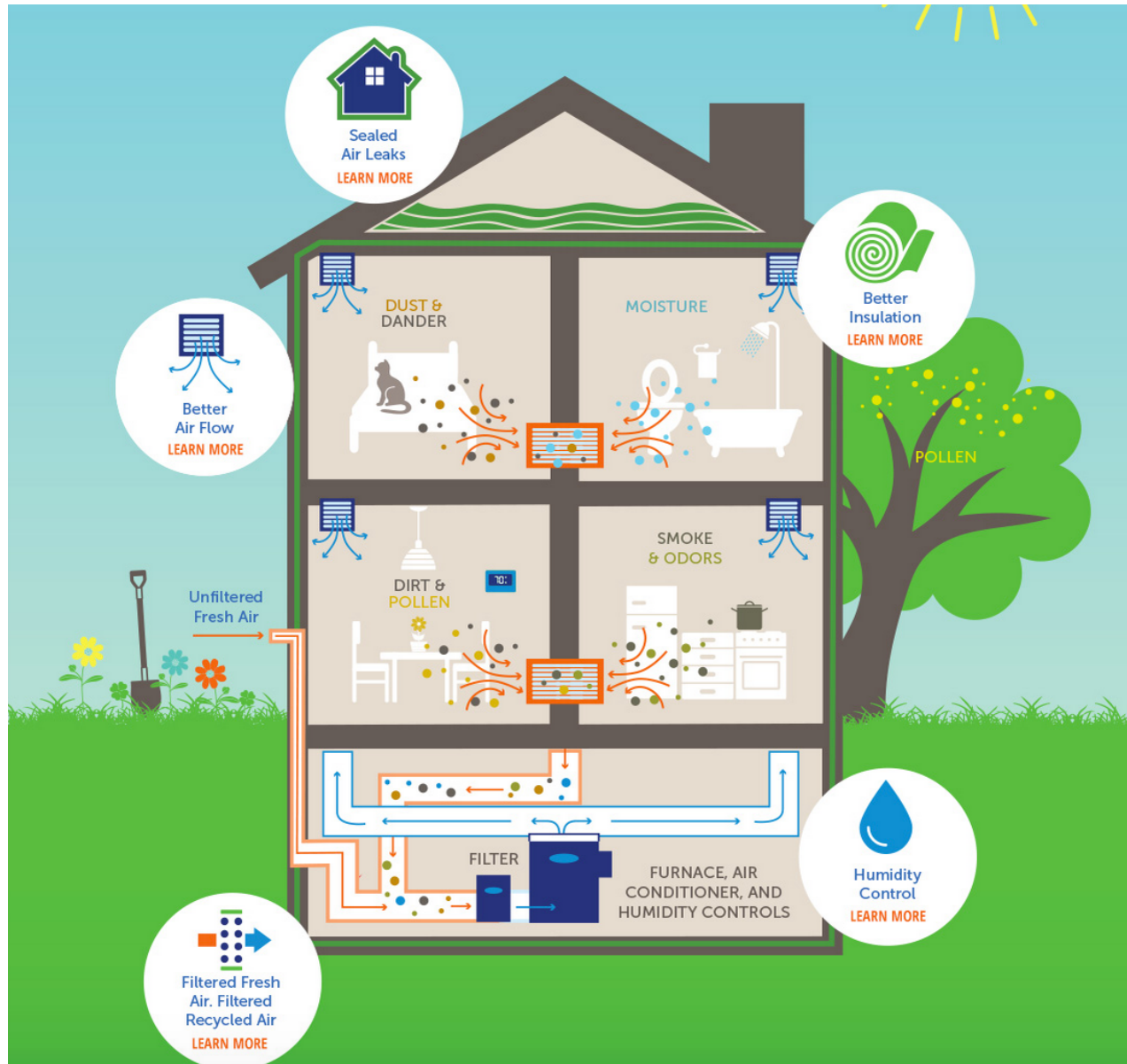
BPI BUILDING PERFORMANCE INSTITUTE TEST CENTER

Communicate Your Services

- **Envelope Control (air leakage)**
- **Whole House Ventilation**
- **Crawlspace Encapsulation**
- **Duct cleaning and sealing**
- **Moisture Control**
- **Equipment Replacement**


The Ultimate Indoor Air Quality System

Breathe Easy Home's Indoor Air Quality System removes allergy and asthma triggers, and other irritants and pollutants, from your home's indoor environment. We make structural improvements that are more effective than store-bought air purifiers, filter upgrades, HEPA vacuums, or bedding wraps. You'll feel better with healthier air.



Use Case Studies

- Measures We Implemented
- Voice of the Client


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ABOUT OUR WORK OUR SERVICES OUR WORLD





HOME PERFORMANCE
KITCHEN & BATHROOMS
LIVING SPACES
WHOLE HOUSE

Of Mice and Men



A Cambridge Retrofit Does More Than Save Energy

When the owners of this 1873 home came to us they were at their wits end: they couldn't stay warm in the winter no matter how high they turned up their heat; they had a major mouse problem; and the wife was suffering from health issues that she felt were exacerbated by indoor pollutants. The homeowners loved their house, with its charming period architectural details, and they loved its location in a vibrant neighborhood of Cambridge. But its poor energy performance and air quality were detrimental to their quality of life.



Benefits

COMFORT & HEALTH

Social Media for Storytelling & Emotion

Energy Docs

Energy Docs Timeline 2013

Energy Docs shared a link.
October 8, 2013

Energy Docs Home Performance Contractor has greatly improved the health and happiness of children and those with respiratory conditions through careful attention to the identification and reduction of potent asthma triggers through our comprehensive home performance fixes to homes.

Here's one of our case studies where the clients were thrilled with the transformation in their health, and one their doctor immediately noticed, and they are saving 76% of their energy bill, to ... See More

Energy Docs Home Performance Case Study
www.youtube.com

This Energy Docs Home Performance actual case study shows real utility bill data proving that Home Performance upgrades can reduce energy bills by 76% and sa...

DSCF0661.jpg

Like · Comment · Share

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Recent

2014

2013

2012

2011

Created

Sponsored

Create Ad

Need to hire Interns?
internmatch.com

HIRING MADE EASY

Post on InternMatch & start reaching students from every top university today!

Crown Your Brand the King
ignite800.com

Vanity toll free numbers help your brand live on in the hearts & minds of your customers.

Mobile Share® Value Plans
att.com

Our new, best-ever small business value plans. Learn more.

After Heart Attack
fourierstudy.com

Adults May Qualify for a CVD Clinical Research Study for an Investigation Medication.

Voice of the Customer: Priceless

LOVE OUR HOME!!! There just aren't enough good words to express what Energy Docs has done for us! For the first time since owning this home we have a PG&E bill that is less than \$1500, even less than \$300!!! and for the first time in 12 years our son has made it through his first December without a trip to the hospital because our air quality is so much better! This project has improved our lives in more ways than we could have imagined. Thank You So Much

Unlike · Comment · Tuesday at 9:42pm



You like this.

Customer Journey Example: Facebook

Don't forget this important spring cleaning task!

<https://goo.gl/qzZaHM>

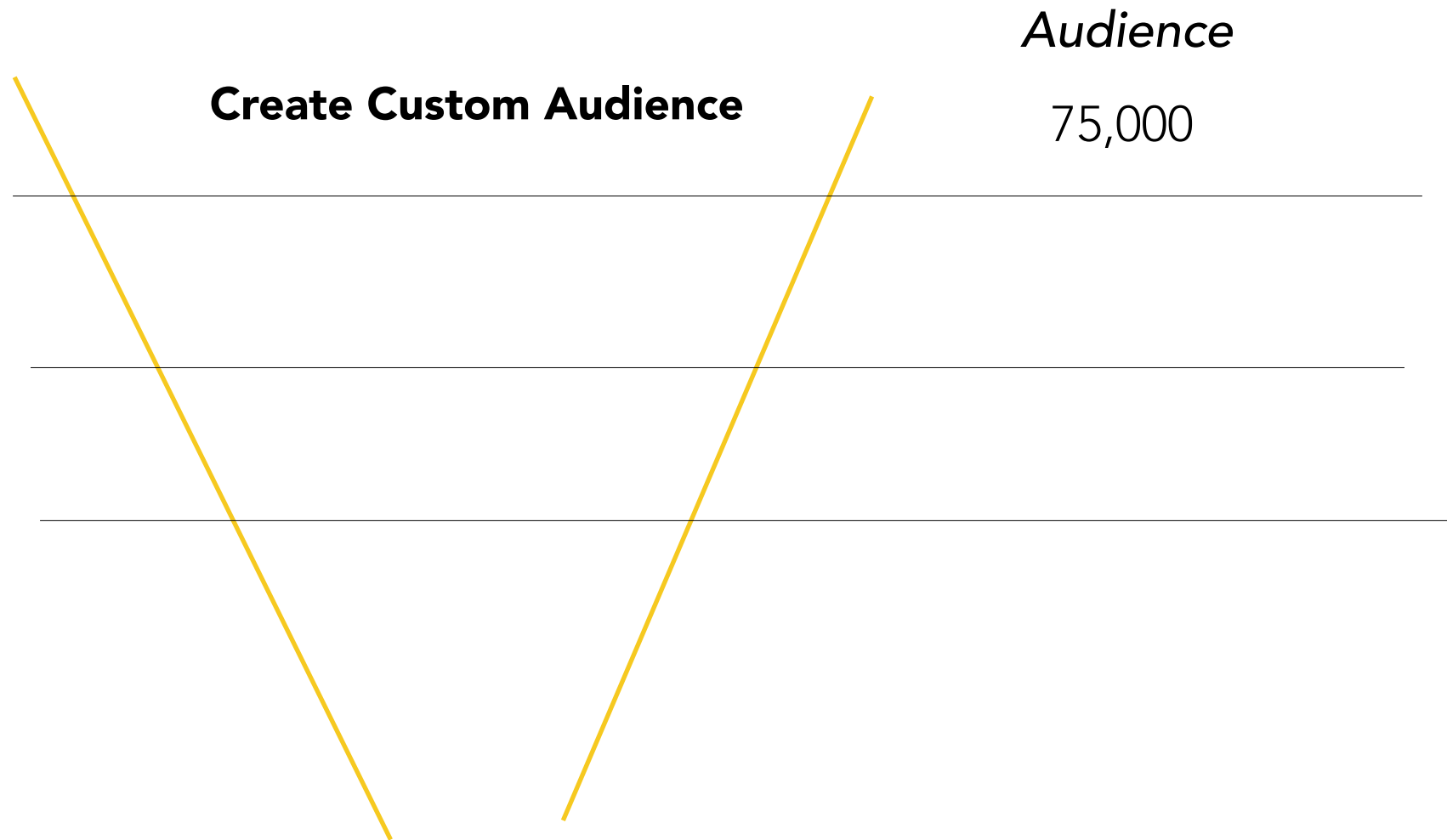


Add a Healthy Home Evaluation to Your Spring Cleaning List

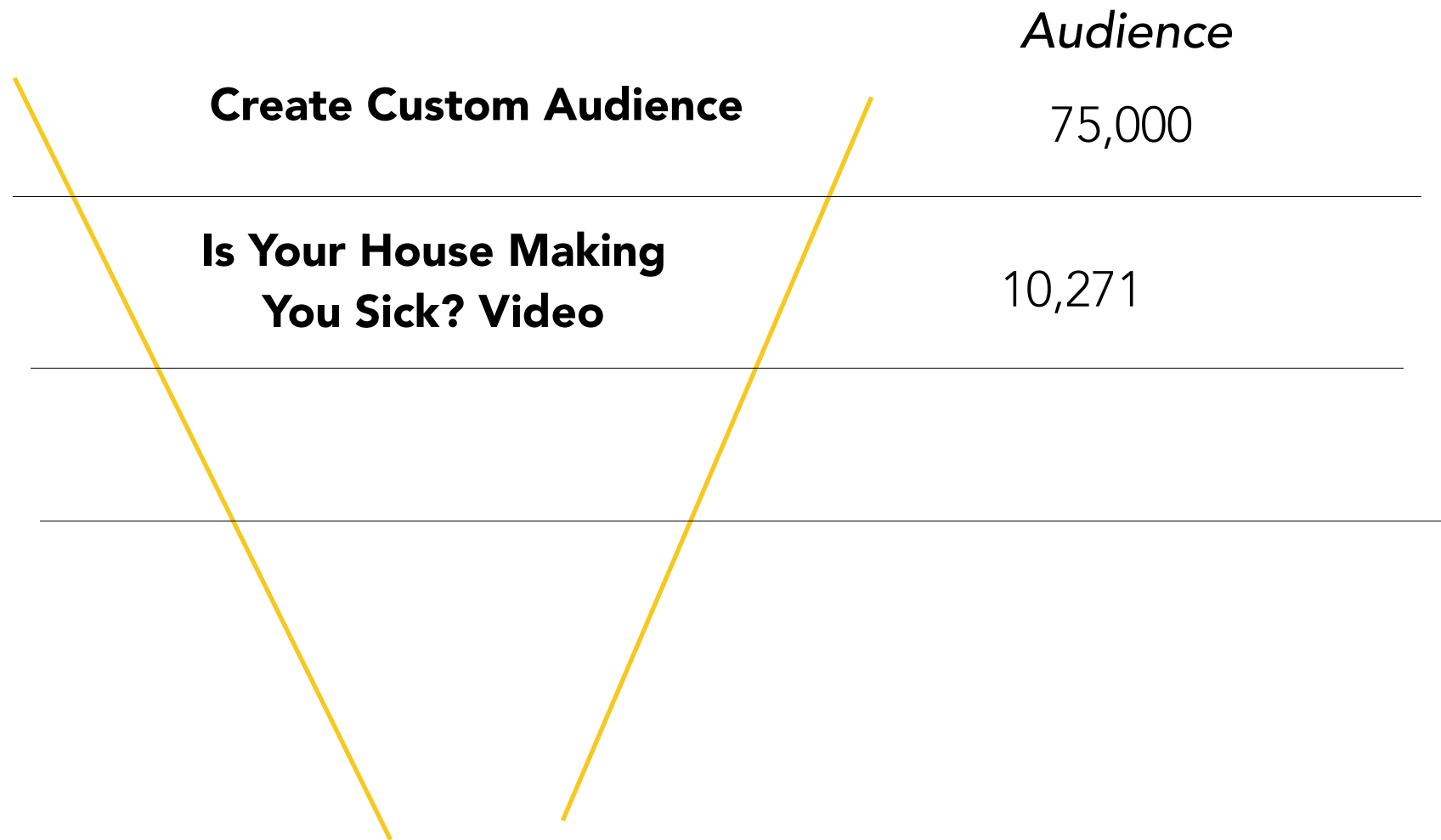
With the weather finally warming up and the days getting longer, you're probably itching to tackle some projects around the house. Maybe you've caught the...

[Learn More](#)

Facebook Custom Audiences



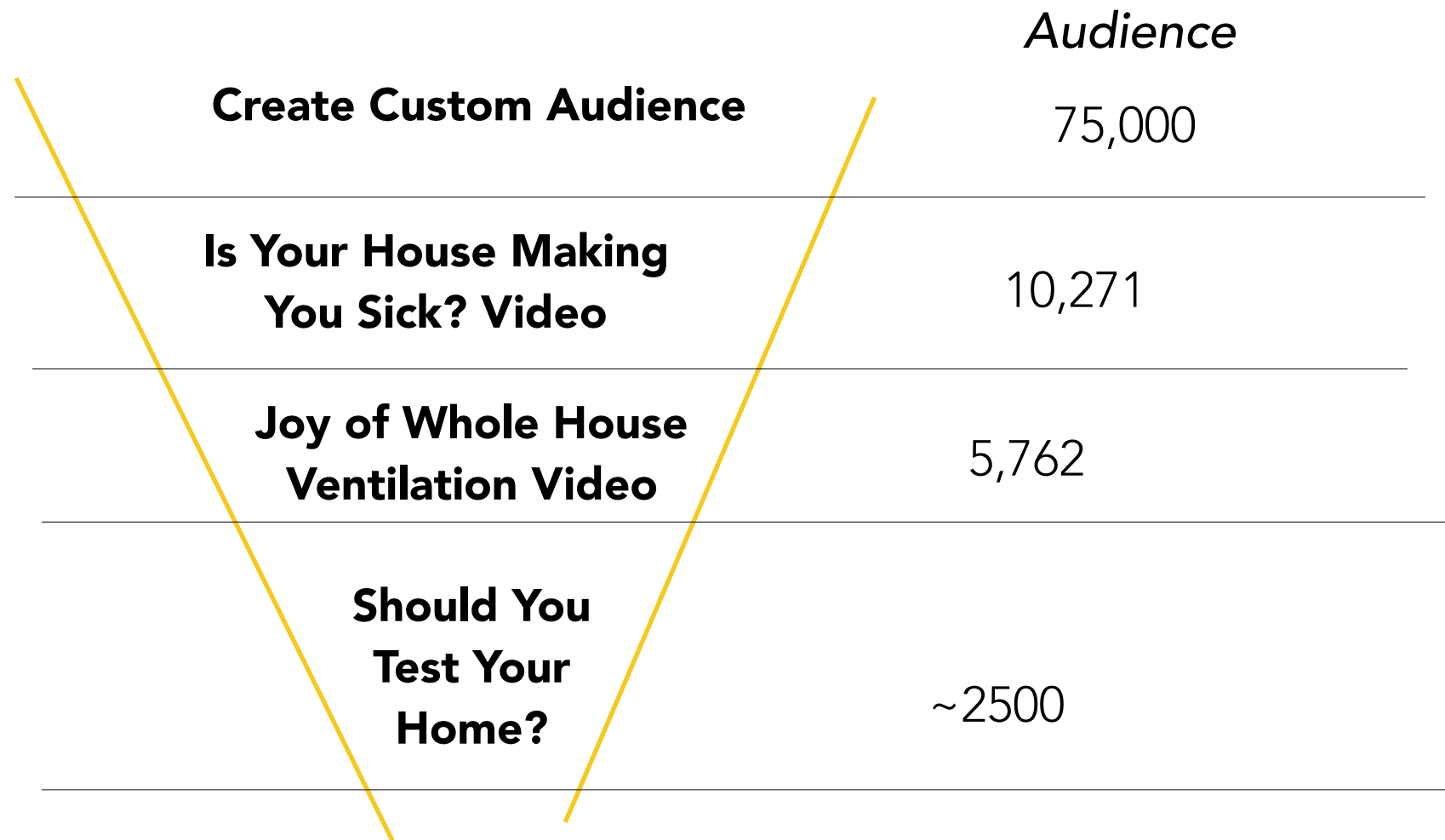
Facebook Custom Audiences



Facebook Custom Audiences

	<i>Audience</i>
Create Custom Audience	75,000
Is Your House Making You Sick? Video	10,271
Joy of Whole House Ventilation Video	5,762

Facebook Custom Audiences



Web Visits & Lead Conversions



QUESTIONS?

Peter Troast

peter@energycircle.com