

# Why EZ Breathe?

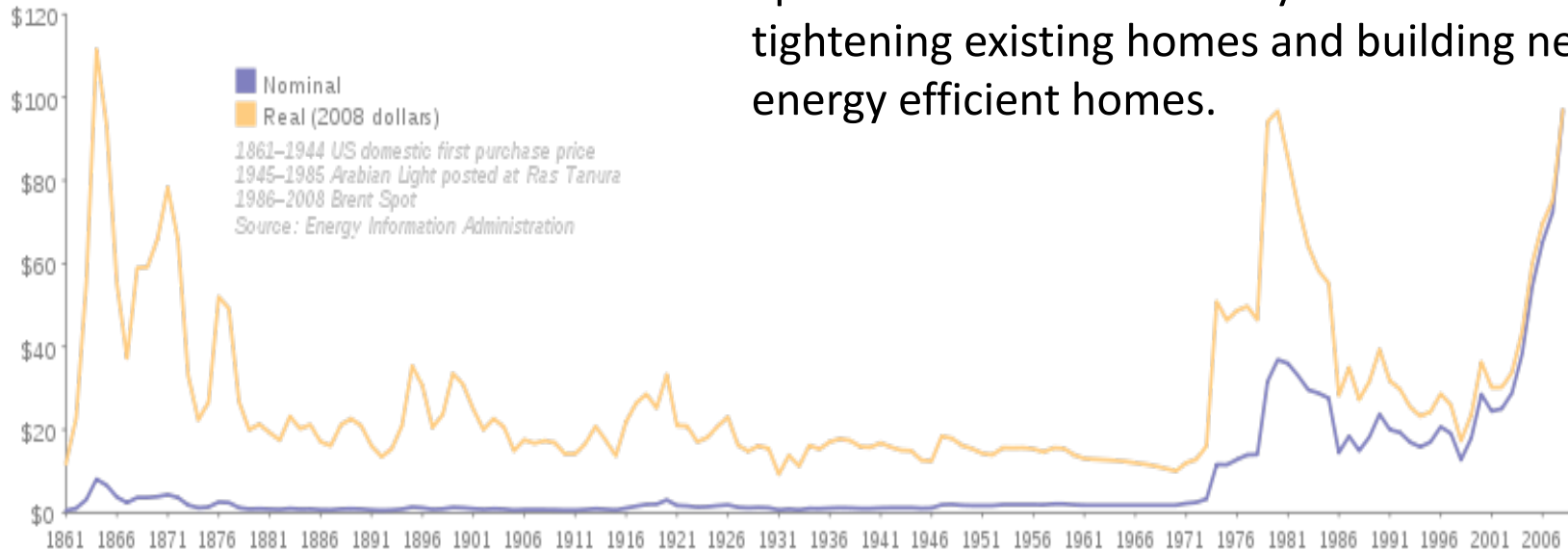


The EZ Breathe Story...

# The Problem?

- Air Tight Homes

1973 - American Society of Heating Refrigeration and Air Conditioning Engineers, ASHRAE - 62.1 Reduced the air flow from 15 cubic feet per minute (cfm) per person to 3 cfm.



Spawned an entire industry dedicated to tightening existing homes and building new energy efficient homes.

# Specifically...

## What makes a home “Air Tight”?

- Blown Insulation
- House Wrap - Tyvek
- New Windows
  - Double Pane, Triple Pane
- Sealants
- Caulking
- New Siding
- New Doors



# Effects of Air Tight Homes

- Positive Effects

- Increased Energy Efficiency
- Low Energy Costs
- Higher Resale Value



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- Negative Effects

- Stagnant Air
- Trapped Gases
- Pollutants
- Allergens



# Effects of Air Tight Homes

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- Sources?



# Effects of Air Tight Homes

- Sources

Cooking, cleaning, bathing, painting, furnishings, off-gassing from building materials, glues, epoxies, resins, health & beauty products, family pets, breathing, etc.



Basically, our everyday lifestyle...

# Volatile Organic Compounds -VOCs

<b>POLLUTANTS</b>	<b>FOUND IN</b>
VOCS	CARPET, PAINT, FABRIC, FURNITURE, CABINETS, CLEANING PRODUCTS, ETC.
MOLD & MILDEW	AIR CONDITIONERS, HUMIDIFIERS, DEHUMIDIFIERS, HEATING DUCTS
NITROGEN DIOXIDE	WOOD BURNING STOVE, FIREPLACE SMOKE
FORMALDEHYDE	RESIN BASED
RADON GAS	SEEPS THROUGH FOUNDATION
AIRBORNE PARTICLES	CARPET, DUCTS, HOUSEHOLD CLEANING PRODUCTS, BLEACH, HAIRSPRAY



# What do the experts say about the negative effects of air tight homes?

- “The air in the average American home ***is a minimum of 5x more polluted*** than outdoor air”
  - The U.S. Environmental Protection Agency
- “14x more deaths are caused from poor indoor air quality than outdoor air, accounting for 2.8 million deaths per year”
  - The World Health Organization

# Experts continued...

- “There isn’t any virtue in creating a tight structure if the quality of air in that structure is substantially lower than outdoor air.”
  - Michael Fallarino,  
*Green Building Product News*
- “We have tipped the scale in favor of energy efficiency to the detriment of our indoor air quality, creating a toxic indoor environment”
  - Stephanie Desmon,  
Indoor Air Pollution Aggravates Childhood Asthma presentation,  
IAQA conference, 2011

# Experts continued...

- “Of the hundreds of chemicals regulated by the EPA, only two are more prevalent outdoors than indoors.”

– Maurice Levitch, *Invisible Killer*

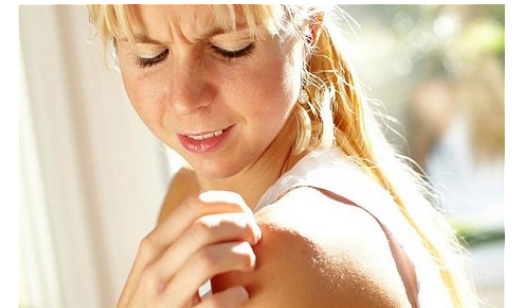
- “Many of the pollutants may come from materials used in the construction of the structure or from objects, furnishings, and chemicals brought into the structure.”

– Michael Fallarino,  
*Green Building Product News*

# Consequences of an Air Tight Home

- “Sick Home Syndrome”

Situations in which a structures occupants experience acute, adverse health effects and/or discomfort that appear to be linked to spending time within the structure and have no specific link to an illness, caused by poor air quality often linked to little or no ventilation.



# Consequences of an Air Tight Home

- “Sick Home Syndrome”

- Headaches

- Eye, nose or throat irritation

- Dry mouth

- Dry or itchy skin

- Dizziness

- Difficulty concentrating

- Fatigue

- Sensitivity to odors

- Allergies

- Hives

- Sinus/respiratory infections

- Rashes

- Tuberculosis

- Some types of cancer

Past solutions  
for combating  
indoor air pollution?

# Past Solutions

- Dehumidifiers

- Collects moisture from the air and condenses it into liquid form
- High cost of operation - \$20-\$40 /month in electricity
- Requires maintenance – disinfecting vs. emptying
- Does nothing to ventilate



# Past Solutions

- Air Purifiers / Air Cleaners



Re-circulates stagnant air

- Creates ozone
- High cost of operation
- High cost of maintenance, costly filters
- No ventilation





# Past Solutions

- Plug-ins, Candles, Air Fresheners

- Simply mask the problem
- Add more pollutants into environment
- Nothing to ventilate
- “Air freshener industry is up 500% in the past four years, these devices contain 100s of chemicals that are contributing to poor indoor air quality.”
  - Stephanie Desmon, IAQA conference, 2011



# Past Solutions

- Open Windows
  - Brings in high humidity, moisture
  - Spot ventilation at best



# Past Solutions

- Dehumidifiers

- Collects moisture, \$20-\$40 /month, maintenance, **no ventilation**

- Air Purifiers / Air Cleaners

- Re-circulates air, ozone, high costs, **no ventilation**

- Plug-ins, Candles, Air Fresheners

- Mask the problem, increase indoor pollutant level, **no ventilation**

- Open Windows

- Brings in high humidity, moisture
- Spot ventilation at best

# Current Solutions

EPA recommends three major strategies to reduce indoor air pollution...

## 1. Source Control –

Eliminating the individual sources of indoor air pollution or reducing their emissions is one way to improve the air quality in the home.

# Current Solutions

## 1. Source Control

- Waterproof
- Fix leaky down spouts
- Remediate mold and mildew



# Current Solutions

## Sources of indoor air pollution?

Cooking, Cleaning, Bathing, Furnishings, Off-gassing, Glues, Epoxies Resins, Paint, Health & Beauty products , Family Pets, Breathing, etc.

Not very practical – many sources based on lifestyle



# Current Solutions

## 2. Air Cleaning

- Requires excessive energy consumption
- Limited service area
- Costly filters and maintenance
- Whole house air cleaning – not very practical

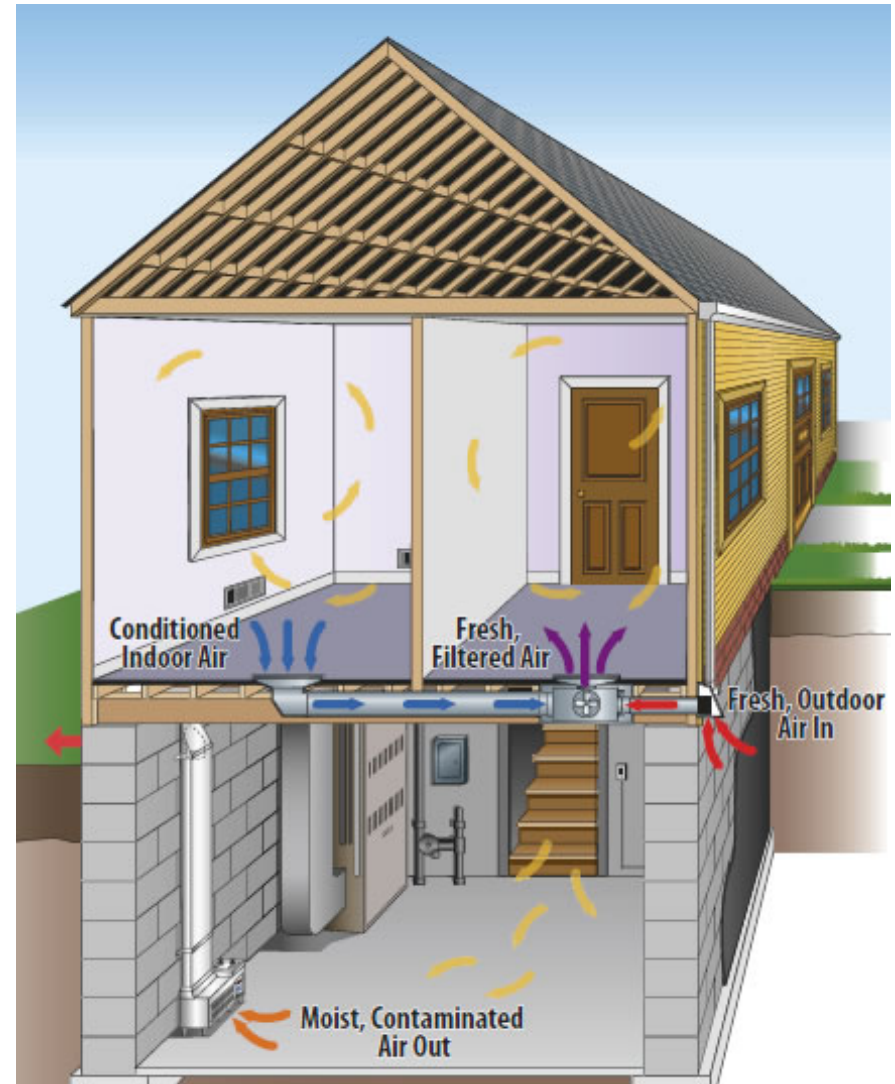


# Current Solutions

## 3. Ventilation-

### The BEST Solution

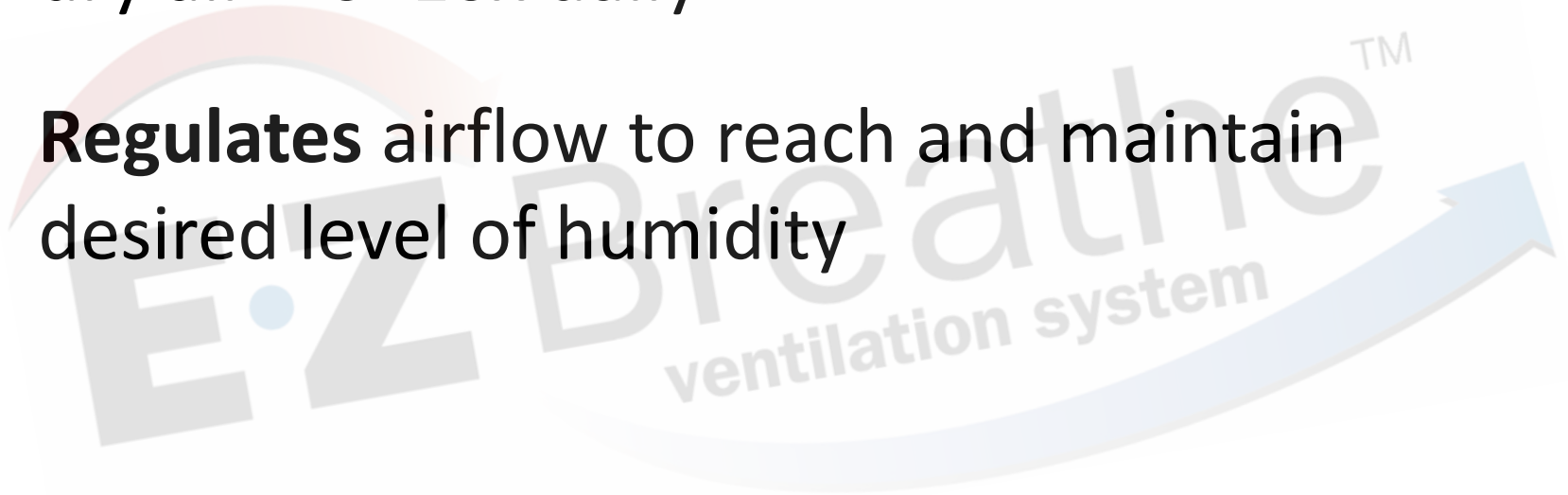
- Increase the amount of outdoor air entering the building envelope.
- “Solution by Dilution”





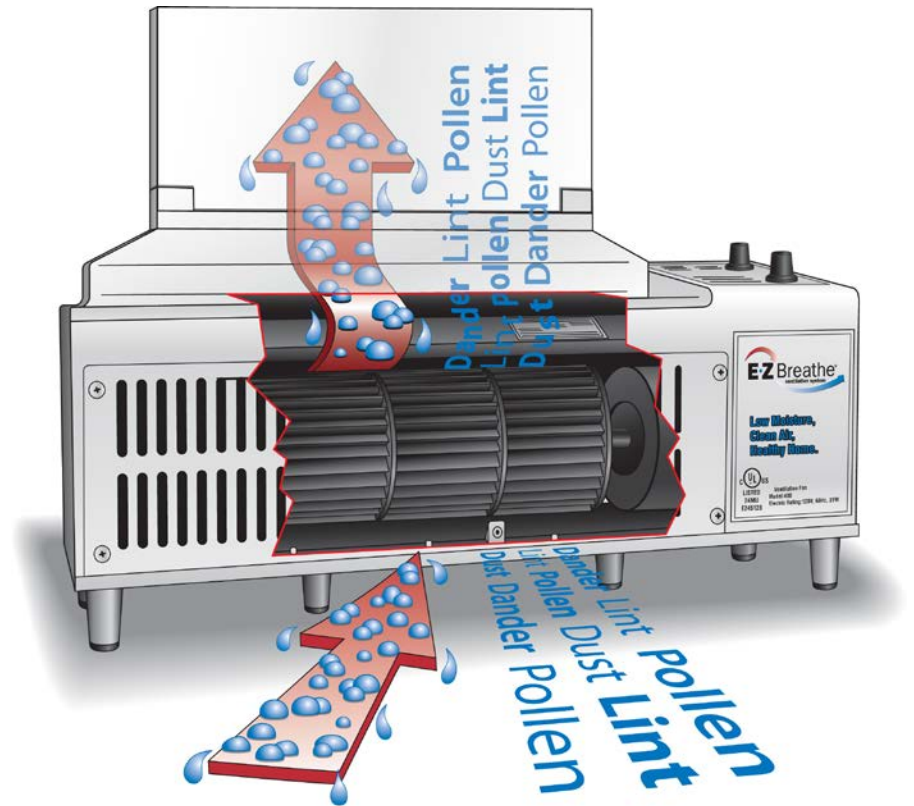
# EZ Breathe Ventilation System

- **Ventilates** by drawing the moist, stale, most contaminated air from the home.
- **Replenishes** the moist polluted air with fresh dry air – 6 -10x daily
- **Regulates** airflow to reach and maintain desired level of humidity



# Features / Benefits of EZ Breathe

- Offers whole home air exchange
- Expels pollutants, allergens
- Cost Effective \$2-\$4/ month
- Improves air quality
- Lowers humidity
- Reduces radon levels
- No maintenance
- Quiet operation
- Flexible installation options
- 7,000 sq foot service area
- Eliminates odors
- Exhausts airborne particles



# I need an EZ Breathe...

“I love my E-Z Breathe. We have five cats and three litter pans and I can no longer smell them when I go down to the basement.”

— Kathy Sledy

“The E-Z Breathe is one of the best investments we have ever made. The house has a fresh and clean smell all the time, no more musky smell in the basement. Cooking odors disappear faster. The system is very quiet and the warranty is unbeatable.” — Bobby D. Rhinehard

“We had our EZ Breathe put in at 10am and by afternoon of that same day the odor was gone! Thank you EZ Breathe.”

— Susan Kieben



“Now when we enter our house, it feels like we’re walking into a new home! E-Z Breathe has helped to solve our moisture and mold problem, and completely removed the stale, musty odor — for good. Thank you!”

— Richard and Tonya Spraggins.”