

# Home Asthma Reduction Training Workbook<sup>®</sup>



Helping you to reduce asthma for  
the ones you love!





# Home Asthma Reduction Training (HART)<sup>®</sup>

This workbook is designed to address children's asthma in the home setting and assist parents and child care providers in doing everything they can to help control "triggers" that can worsen asthma. The workbook can be used in conjunction with a physician's action plan but also can be used as a stand-alone resource to create a home environment that is asthma friendly.

H.A.R.T requires active participation and in some cases asks you to change the way you do things around your home. Please feel reassured this is not a commentary on how you operate your home. The methods described in this manual have proven effective in reducing the incidence of asthma. We hope you come away with a clear understanding of what is in your home that affects asthma, knowing that the more work you accomplish the healthier your home will be!



## Asthma

A reversible obstructive lung disease caused by inflammation & increased reaction of the airways to various triggers.

Blocks airflow through bronchial tubes

## Asthma Attacks

Bronchial tubes are further Inflamed & Obstructed

Air sacs become enlarged

Life threatening if not properly managed

## Home Asthma Triggers

Asthma triggers are substances that make your asthma worse and can cause asthma attacks.

Tobacco Smoke

Animal Dander

Vehicle Exhaust

Air Pollutants

Ozone (or smog )

Wood Smoke

Molds

Perfume

Pollens

Dust

Many household products

Home Building Products

Industrial Emissions

Dust Mites

## Common Triggers

## Sources & Sites (where to find them)

### Tobacco Smoke

Smoke yourself  
Live or Work with a smoker  
Pregnant and smoking  
Pregnant & living with a smoker

### Vehicle Exhaust

Living near busy roads, freeways etc  
Commuting  
Poor ventilation from attached garage  
Starting car in garage without door open

### Ozone (or smog)

Smog  
In home Ozone generator air “cleaners”

### Molds

Certain times of the year outside  
Unattended leaks in the home  
High relative humidity in the home  
Cool or leaky rooms

### Pollens

Location  
Time of year

### Many household products

Toxic cleaning products  
Furniture

### Industrial Emissions

Located near or downwind of industry  
Working at industrial plant

### Did you know?

#### V.O.C.:

Volatile Organic Compound — a toxic compound that becomes volatile at room temperature.

## Common Triggers

## Sources & Sites (where to find them)

Animal Dander –  
Cats  
Dog

Bedding  
Mattresses  
Pillows  
Carpets

Air Pollutants

Varies with location –cars, industry,  
back yard burning

Wood Smoke

Wood stoves  
Outdoor burn piles

Perfume

Personal choice  
Scented products - cleaning

Dust

Skin flakes—people, animal  
Paper fiber  
Hair

Home Building Products

Asbestos  
Sheet rock dust  
Wood dust  
Paints

Dust Mites

Fabric couches  
Bedding  
Mattresses  
Carpets  
All surfaces if humidity high enough



## Reducing Asthma Triggers

### Asthma Trigger

### How to Reduce Triggers

**Tobacco Smoke**

Do not smoke or be around smokers  
Do not allow smoking on your home

**Vehicle Exhaust**

Do not idle car in attached garage  
Air seal doors from house to garage

**Ozone**

Do not use ozone generators  
Avoid smog when possible

**Molds**

Keep humidity 40-50% \*\*\*\*  
Fix leaks promptly  
Keep house, surfaces warm enough  
Avoid seasonal outdoor blooms  
Keep home free of mold

**Pollens**

Avoid areas/times of seasonal blooms  
Keep home free of dust (pollens collect)  
Filter incoming air

**Many Household Products**

Use non-toxic cleaners  
Choose non-toxic furniture, carpet and materials

**Industrial Emissions**

Relocate  
Filter incoming air  
Clean frequently to eliminate build up inside the home



# Asthma Trigger Elimination

## Asthma Trigger

## How to Reduce Triggers

### Animal Dander

Keep pets outside  
Wash clothes and bedding often  
Damp dust & vacuum frequently  
Isolate where pet can go in home  
Make bed for pet ( not on furniture)

### Air Pollutants

Cleaning home often reduces accumulation  
Filter incoming air  
Plant trees for screening from roads

### Wood Smoke

Compost yard waste vs back yard burning  
Ensure properly drafting woodstove  
Be aware of seasonal air quality alerts

### Perfume

Avoid perfumes (don't use fabric softener sheets)  
Use unscented, natural products  
Do not use chemical air "fresheners"

### Building Products

Encapsulate asbestos, lead  
Ventilate while painting  
Use low-voc\* products  
Ventilate and mask off dust generating areas

### Dust Mites

Keep humidity 40-50% \*\*\*\*  
Wash bedding, in hot (above 130°F) water  
Use dust mite covers  
Clean and vacuum often

## Asthma Trigger Matching Exercise & Action plan

Site	Associated Trigger	Action plan
EXAMPLE - BED	Dust Mites	Wash bedding in hot water
		Use dust mite covers
		Keep humidity in bedroom below 50% RH
Site	Associated Trigger	Action Plan

## A Healthy Home is...

A Healthy Home is a home that benefits the health of its occupants.

## 7 Easy Steps to a Healthy Home

1. Keep your home Clean & tidy!
2. Keep your home Clutter Free!
3. Eliminate toxic pollutants.
4. Keep water in its place!
5. Eliminate molds & mildews
6. Take your Shoes Off!
7. Allow plenty of fresh air & good ventilation!

# Step 1

## Keep your home clean & tidy!

A clean & tidy home is usually a healthy home. By keeping your home clean & tidy you eliminate many of the triggers that cause asthma attacks. The cleaning supplies you use should be non-toxic and contain no perfumes or artificial colorings. Cleaning should be done when children are not present to avoid exposure to triggers. Also, the person doing the cleaning should consider wearing a mask while cleaning to avoid exposures, especially if they have asthma or allergies! \*\*\*\*\*

The types of dust found in most homes consist of human skin scales, lint and paper debris. Dust mites live on those skin scales, and molds love paper. By allowing this 'dust' to lay around for long periods of time, we are basically inviting dust mites and molds to "kick back and stay awhile"!

As particles (pollens, mold spores and other allergens) settle out of the air, they accumulate on the various surfaces of our homes, awaiting a good breeze or someone to walk by and stir them up into the air again for us to breathe. To stop this cycle, consistent damp cloth dusting is required.

Keep in mind you are trying to control teeny tiny microscopic particles—clean thoroughly to leave surfaces particle free, not just neat appearing from a distance.

\*\*\*\*This is required if the person cleaning has asthma or allergy.

# Step 2

## Clutter Free!



To be clutter free, you must be tidy & exercise **Conscious Buying!** Keeping your “stuff” organized is the key to being tidy. There are many bins and containers that allow storage & can be easily dusted.

Conscious Buying entails really thinking out your purchases and only buying things that really serve you.

Items that last, items that will do what we bought them for over and over again.

When we buy unconsciously we end up with items we don't really love, that don't fully serve us or we use once or twice. Some items break down long before they should, or are one-use items that end up in the garbage



or throughout our homes. They are “impulse purchases”. Eventually we have too many items that we can't manage and that leads to Clutter. When our houses are cluttered we cannot clean them adequately. This allows more surfaces to accumulate dust on, gives pests places to live, and stops us from cleaning our homes. This leads to increased levels of asthma triggers. **Clutter=Asthma Triggers**

However, by surrounding yourself with items that you love & that serve you, you are creating a healthy space. A space that can be cleaned more easily. A space that can be managed and serve you better.

And who knows, you may save a little money also!



# Step 3

## Eliminate Toxic Substances

The revolution made by the chemical and industrial industries has been immense. We can buy many affordable items (plastic shelves etc.) that serve many purposes. The downside of such proliferation is that many of these items contain toxic chemicals and substances. Once these items are brought into the home they off-gas and can build up toxins inside the home. The more toxic the item purchased, the more toxins can build up in the home, affecting everyone in the household. Exposure rates go up because we spend 90% of our time inside. So a little bit of toxin can go a long way.



How do you know what is toxic? Watch out for materials containing V.O.C's (Volatile Organic Compounds), formaldehyde, chlorine, asbestos, fiberglass, ammonia, plastics etc. Read the labels, ask questions before you buy. "Buy Green" (environmentally safe) when possible, as you can imagine if you do not want it in your home, you don't want it produced in someone else's back yard! (refer to "Buy Smart/ Buy Safe")



We have included a book, "Safe Shoppers Bible" to help you with finding healthier products, also a few other resources were included to help you understand what you might be bringing into your home.

Some other toxic substances could include: smoking, pesticides, toxic cleaners and bleach just to name a few. That gives you the idea!



# Step 4

## Keep water in its place

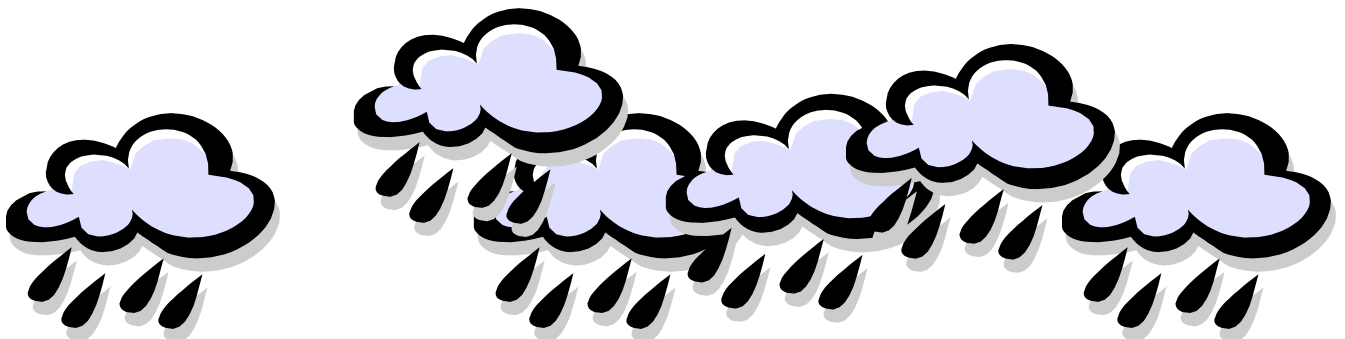


It has been one of the main historic purposes of a shelter, yet many of us still battle water! **Leaky** roofs, windows, gutters and doorways allow water into our homes. **Leaky faucets & fittings, burst pipes and faulty plumbing** can also add water to our homes. And as if that were all the sources, we have one left – us! We add water to our homes through our breath and the **Vapor** (humidity) of our cooking, cleaning and bathing!



Water can begin to decompose our homes, by giving molds a place to grow! Molds emit mycotoxins. The ‘toxin’ part of this word is all that matters. Yes – they produce substances that are toxic to other molds but also to us! Molds like humid environments, and although there are thousands of molds, each with a different lifestyle, the important thing to know is that their lifestyle should not include humans!

That is one of the main reasons we want to keep water out. The water we create in our homes is usually measured as **Relative Humidity** (the amount of moisture in the air). **Relative Humidity** can cause condensation on your windows in the winter time. High **Relative Humidity**, 50% or greater, can cause molds, dust mites, certain bacteria and viruses to grow. So it is important to keep **RH** down to about 40- 50%!

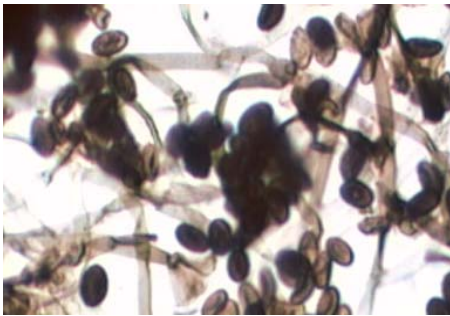


# Step 5

## Eliminate Molds & Mildews

Molds are toxic to humans. It doesn't matter what type, or how much. They are toxic. Sometimes there is a lot of mold, sometimes a little. What we strive for in Healthy Homes is no mold at all anywhere, period!

The health impacts of mold varies from person to person. What could be tolerable for one person could be very harmful to another. Children with asthma are very sensitive to molds! Molds weaken the immune system as our body fends off the mycotoxins. Which means, that over time, if chronic exposure happens, one can become sensitive, irritated, and weakened by mold.

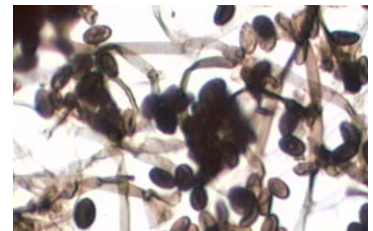
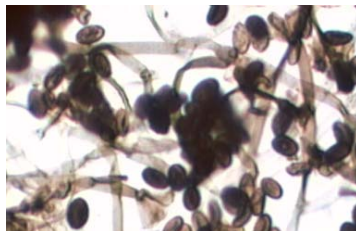
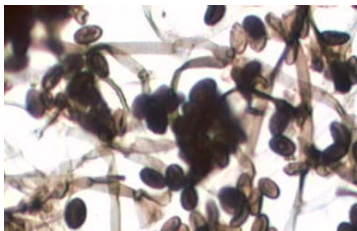


Stachybotrus up close

This is how it works...

Imagine someone bouncing a light plastic ball against your head. The first few times it doesn't hurt but after the 50<sup>th</sup>, 100<sup>th</sup>, 1000<sup>th</sup> time you will probably have a headache!

That is how chronic exposure works; small doses, administered over time, consistently, everyday, for many years. Then one day, surprise! You don't feel so hot! So, to reduce your risk, eliminate molds & mildews from your home!





# Step 6



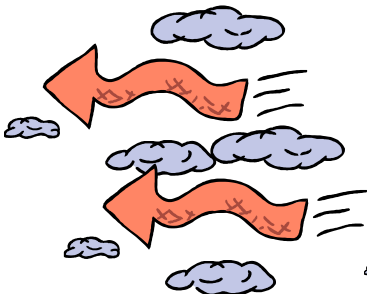
## Shoes Off!



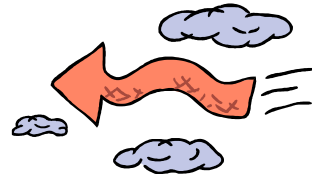
Wearing shoes in your home makes it dirty fast, making cleaning a bigger job than it has to be. Also, wearing shoes in the house causes premature damage to carpet and flooring! In addition, shoes can track in some nasty pesticides, heavy metals, chemicals, viruses and human/pet waste (YUK!) — that you do not want in your home! Those heavy metals and chemicals will find their way into your carpet and potentially expose the little people that crawl and play there! Shoe free is the way to be!



# Step 7

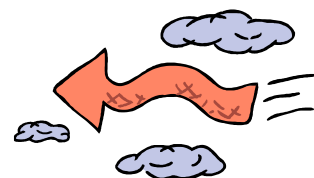


## Plenty of fresh air – good ventilation!



Homes can get stuffy and humid when not regularly ventilated. Opening windows often, even keeping a few cracked all the

time, can make a huge difference in the freshness of the air in your home. Mechanical ventilation can also be installed to help keep outside air coming in! By providing good ventilation air humidity and CO<sub>2</sub> (Carbon Dioxide) goes down, and any toxins released into your home are given a route to escape, and odors are reduced. High CO<sub>2</sub> levels can cause drowsiness and lack of attention. (CO<sub>2</sub> is a byproduct of our breathe).



## Home Hygiene

The hygiene (level of cleanliness) of your home greatly affects your health. Homes that are cluttered and dirty contribute to asthma in a variety of ways.

1. When a home is cluttered it is difficult to get to the places that need cleaning.
2. Cluttered spaces trap more dust & grime than do clean spaces. They also create spaces for critters & fungi to live, such as mice, ants, roaches, dust mites and mold.
3. Homes that are not cleaned, dusted and vacuumed regularly allow asthma triggers, bacteria and viruses to accumulate, creating a health risk to the occupants.
4. When dust accumulates, it can be stirred up over and over as people walk by or sit down etc. This means that what could be a small amount of dirt or dust gets used over and over again. (Kind of like water in a fountain with water that gets re-circulated! )
5. Homes that are not cleaned regularly and kept clean harbor disease and irritants. **These homes are not healthy.**



# Cleaning Calendar

We have supplied you with a Calendar that you can customize to your schedule. The colors of the dots represent different cleaning activities. We will go through the process of creating the calendar that will help you plan the cleaning of your home. You can use pens to create your own calendar.



- Damp cloth wipe
- Vacuum
- Mop Floors
- Wash Bedding
- Wash Toys

## June 2002

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1 <span style="color: magenta;">●</span>
2 <span style="color: magenta;">●</span> <span style="color: green;">●</span> <span style="color: blue;">●</span> <span style="color: red;">●</span>	3 <span style="color: magenta;">●</span>	4 <span style="color: magenta;">●</span> <span style="color: green;">●</span> <span style="color: blue;">●</span>	5 <span style="color: magenta;">●</span>	6 <span style="color: magenta;">●</span> <span style="color: green;">●</span> <span style="color: blue;">●</span>	7 <span style="color: magenta;">●</span>	8 <span style="color: magenta;">●</span> <span style="color: green;">●</span> <span style="color: blue;">●</span>
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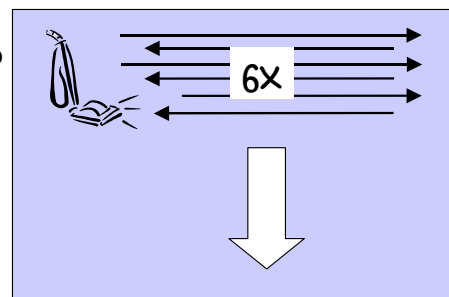
Below is a chart showing the frequency of cleaning & maintenance. Put on the Calendar!

## Cleaning & Maintenance

Daily	Every other day	Weekly	Monthly
Surfaces wiped with damp cloth	Wall to wall carpets vacuumed	Small area rugs washed in hot water	Check all faucet areas for leaking
Wall to wall carpets vacuumed	Floors damp mopped	Children's bed linens washed in hot water	Check all gutters for clogging
	Surfaces wiped with damp cloth	Fabric items/toys washed in hot water	Replace furnace filter during heating season
		Wash light curtains in hot water	Check windows for mold growth

## How to Clean...some tips

1. Remove clutter/put away things, dust, then vacuum, then mop.
2. When vacuuming, open windows and doors to allow a cross breeze through your home. This blows loosened dust & debris outside! If there are outside pollutants (dust etc) clean when rainy or foggy.
3. If you use damp rags and cloth to damp dust and clean, throw them in the washing machine right after you clean. That way they are not hanging around smelly and they are ready to do for next time!
4. Dirty Laundry should be stored in the laundry room, not in the living or bedroom spaces. If that is not possible, keep it at least out of the bedrooms.
5. Wear a mask when dusting if you have asthma, are sensitive or get sneezy!\*\*\*\*
6. Make sure children are not present while cleaning.
7. Take time when vacuuming the carpet, being sure to suck as much dirt etc out as you can! We recommend up to 20 passes for initial cleaning of carpets. 6 slow passes for maintenance. See diagram.  
Review "Cleaning the Deep Dust out of Carpets" brochure



## Types of masks if necessary

There are many types of masks you can choose from. Some are HEPA (High Efficiency Particle Arrestance) rated some are full half mask, with cartridges others are more simple and less costly. Whatever route you choose, some protection is recommended for the deep dusting and cleaning of spaces. Once an area is more or less on a consistent cleaning schedule, chances are you will probably not need as much protection. This varies person to person, please be sensitive to your own needs!

## Home Clutter Reduction

Healthy Homes are free of clutter. Clutter inhibits cleaning which allows asthma triggers to multiply. Clutter is a big problem for most people, so we have outlined some steps and tools that can help you get a handle on it!

### What clutter does

We have all been around, or have seen, or even live in a home that is cluttered full of stuff! You know, boxes to the ceiling, can't see the floor, clothes everywhere—chaos! A cluttered space has numerous negative effects on both the home and its occupants.

1. As mentioned, it inhibits deep, consistent cleaning.
2. It provides more surface area for dust, dust mites and potentially mold to grow on.
3. In some cases it provides habitat for pests, rodents and insects.
4. It does not allow proper air circulation in the home, which is necessary for temperature and humidity control.

### How clutter affects the mind & body

Remember when you first moved into your home? Remember the feeling of open spaces, hallways and rooms? What did that feel like? Usually people feel the sense of possibility, openness and serenity. Then we get our stuff and we begin to “fill the space”. Soon we have it just the way we like it. For some people that means 2 pieces of furniture and a few pieces of art. For others it means lots of stuff, more stuff than can really fit in the room, but somehow we manage to “pack it in”.

Here is a list of common feelings associated with cluttered / stuffed rooms:

Nervous	Weighed down	Sad	A desire to eat
Low self esteem	Tense	Insecure	Claustrophobic
Overwhelmed	Numb	Agitated	

## Home Clutter (continued)

How can you tell?

Look at each photo below and compare. Which one looks tidy? What feelings do you associate with each room?



# Home Clutter Analysis

Clutter problem? No

Items look organized, neat and cleanable. Room is neat in appearance.



Items are disorganized & in disarray. Room is cluttered and uncleanable.



Clutter problem? Yes



## How to deal with it

First off, if your house , or parts of your house look like the bottom picture on the previous page, you have a clutter problem. By admitting that you have clutter you are taking your first step in changing it!

The process of dealing with clutter can be overwhelming! However, the rewards are great, even though it can be a real challenge.

To help you with that challenge, we have outlined some ideas and exercises that will help you to reach your goal of a Healthy Home!

List the clutter free goals for your home. (such as: I can see the floor, or I know where every thing is, or I can get to the gift wrap easily)

1.
2.
3.
4.
5.
6.
7.

List the rooms or areas in your home.

1.	2.	3.	4.	5.
6.	7.	8.	9.	10.

Organize the rooms from most to least cluttered

1.	2.	3.	4.	5.
6.	7.	8.	9.	10.

L

List what is in each room starting with the biggest pieces of furniture & general items

Room 1.
Room 2.
Room 3.
Room 4.

## Home Clutter continued

List what is in your home continued

Room 5.
Room 6.
Room 7.
Room 8.
Room 9.
Room 10.



## Home Clutter continued

- For all the items you put in column 3. Find them a new home as soon as possible! Pick your favorite charity, friend or dump for these items. Who could use these items? If they are broken, and cannot be fixed give the items to someone who can or take them to the dump.
- For all the items in the second column see if they need work, or need to be moved or cared for to maximize their enjoyment. If that feels unrealistic or not doable see if they can be placed in column 3 , and find the items a new home.
- The goal is to have as many items in the 1<sup>st</sup> column as possible, and not have any of the items in column 3 . This means you are surrounded by things that you love and support your life and are not collecting things that you do not like.

Complete the list over the course of a week

The next week find homes for the items in column 3

### **General guidance.**

1. Fix, replace or get rid of items that are broken. Do not keep items around that you say you will fix etc. Chances are you won't, and then the item lays around for months clogging your space.
2. This is a process. If there are items you don't want, but are having a hard time letting go of. Put in a garage or space away from your home. This will allow the process of letting go to happen naturally.

### Our Relationship to "Stuff"

There are some items we have a hard time letting go of. It is helpful to know the relationship that may go with these items so you can understand how to work with them. For example: you have some items that were given to you, by a parent. You don't really like the items, but you feel obligated to keep them. They sit in a box, year after year. A barrier to getting rid of them might be loss, remembrance, guilt. If you can identify the feelings that you have about the item, you will be better able to understand how to relate to it, and then what to do about it.

### How to analyze your next purchase

Only buy what you truly need or love, or that serves your life. Clutter starts in the home when it is filled with items that are not used or loved. Soon the home is filled with "stuff". So start by only bringing into your home what truly supports you. After going through the process above, it is easy to see how not bringing items into your home in the first place is good place to start!

## Home Clutter continued

### Recap of how to do this

- Go to each room, list what is in it.
- Once you have the list, ask yourself if you really need that item. Be honest, do you really need it, or is there an emotional connection connected with having it. When was the last time you used that item? Is it a dust collector? Does it really fit?
- This process can start on a room by room basis, start with the easiest room first, to build confidence.
- Once you have identified the objects that you don't really need, figure out where they can go. A charity organization, the dump, does your neighbor or family want it. Try to find the place that will maximize the use of that object.
- For the items you do need or want to keep see **Organization**

### See Example below

Bedroom	Old dresser	Drawers stick, Don't really need it, its ugly	Give it away Charity
	Bedstand	Really like it, use it every night	I'll keep it
	Hat collection	I like it but it is dusty, don't look at it much	Dust more frequently & place in area where I can really enjoy it

### Organization

**Organization** is one of the key elements to having a healthy home. When we are organized, clarity can be seen in the home. This starts by first keeping only what you need, and finding a new home for the rest. Once you are working with the items you wish to keep, find storage solutions based on frequency of use. In other words the Christmas decorations that come out 1 time a year should be deep stored, the running shoes you use everyday should be readily available. Use the many varieties of totes, boxes and shelving that are now available in most stores. By boxing in non biodegradable containers, you remove chances of mold growth. Containers also stack and clean off easier than loose items. Put like items together and label, label, label!

## Pulling it all together

Now that you understand what asthma triggers are and how they can effect your health its easy to see how a home can affect asthma.

Creating a home that is healthy follows some simple concepts, but it does take work. Many of these steps may be difficult, but that is ok. Each step you complete will add to the health of your home. As you progress take note of how each stage affects your health. As your home feels more healthy enjoy the success you have created!