
Asthma Management for School Nurses

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August 14, 2025



Learning Objective

- Identify four key elements to achieve optimal asthma control.
- Identify ways to control asthma triggers in the school setting.
- Describe updated asthma guidelines for SMART therapy.



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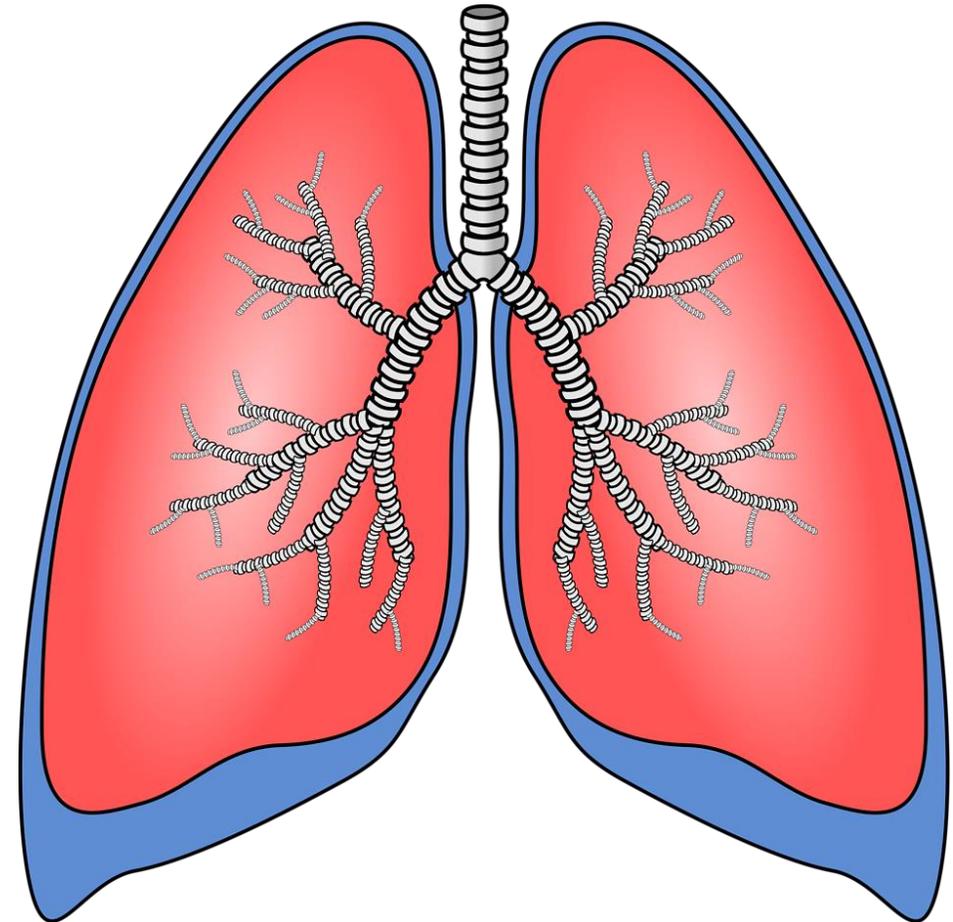
Asthma Basics

What is Asthma?

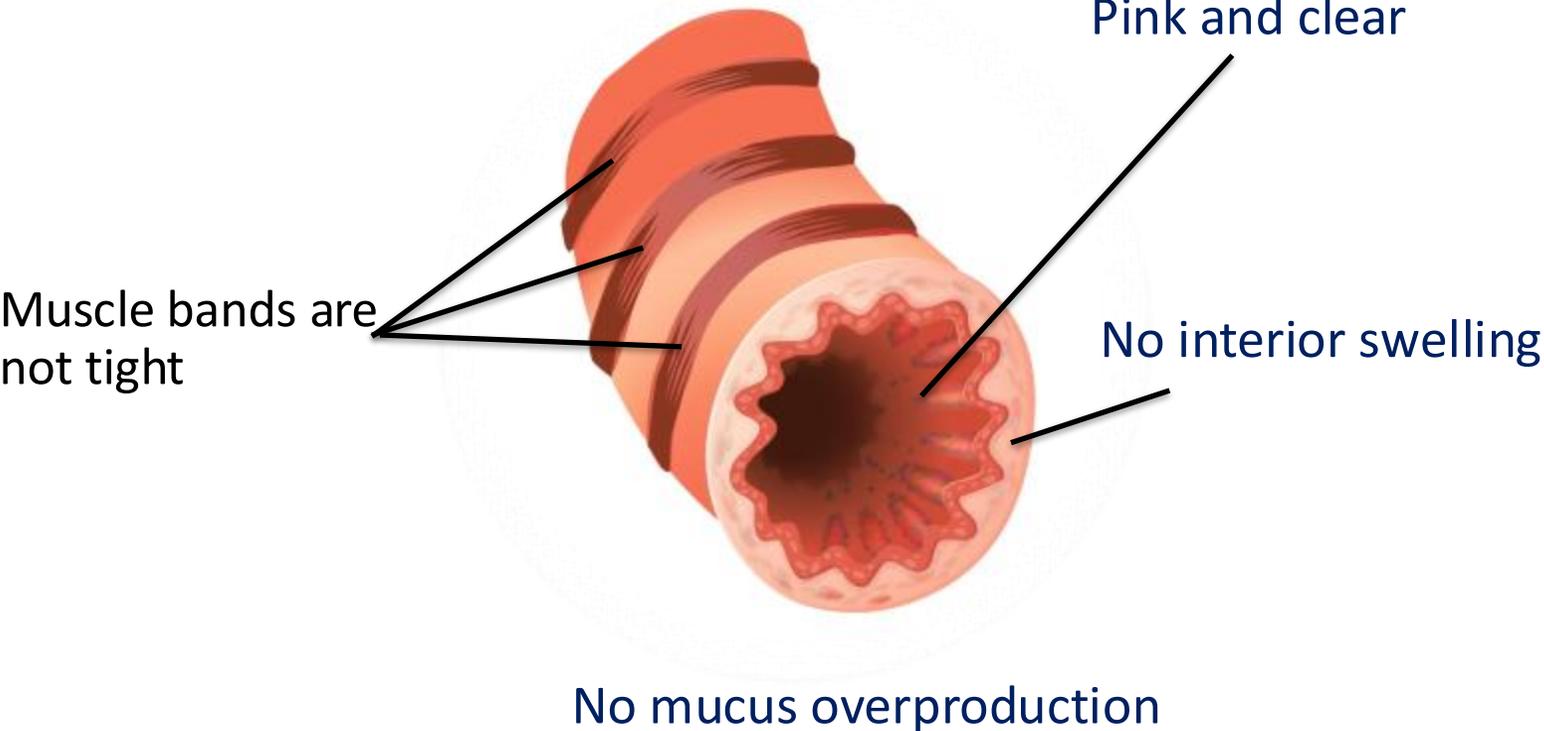
Asthma is a chronic lung condition with reversible airway constriction.

Three main components of Asthma

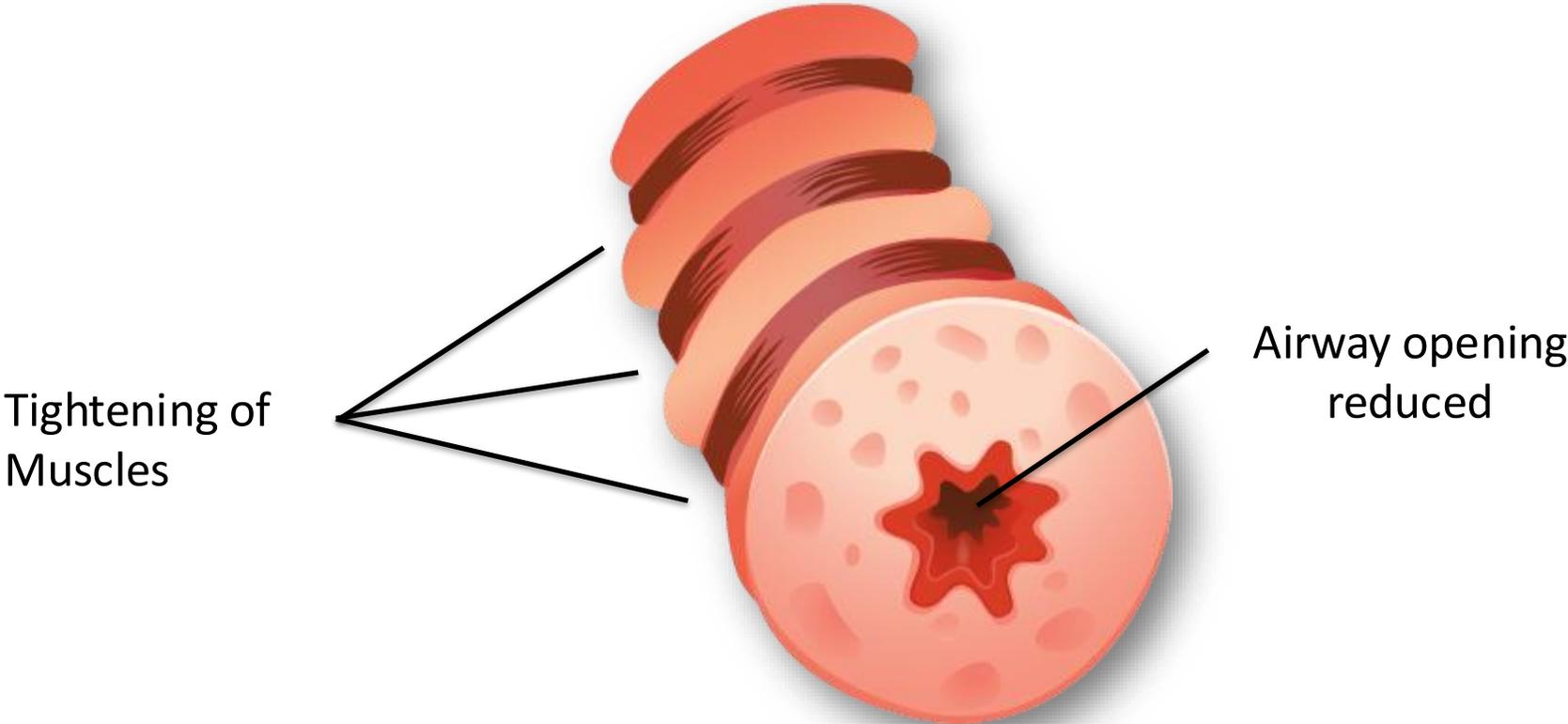
- Bronchoconstriction
- Inflammation
- Increased mucus production



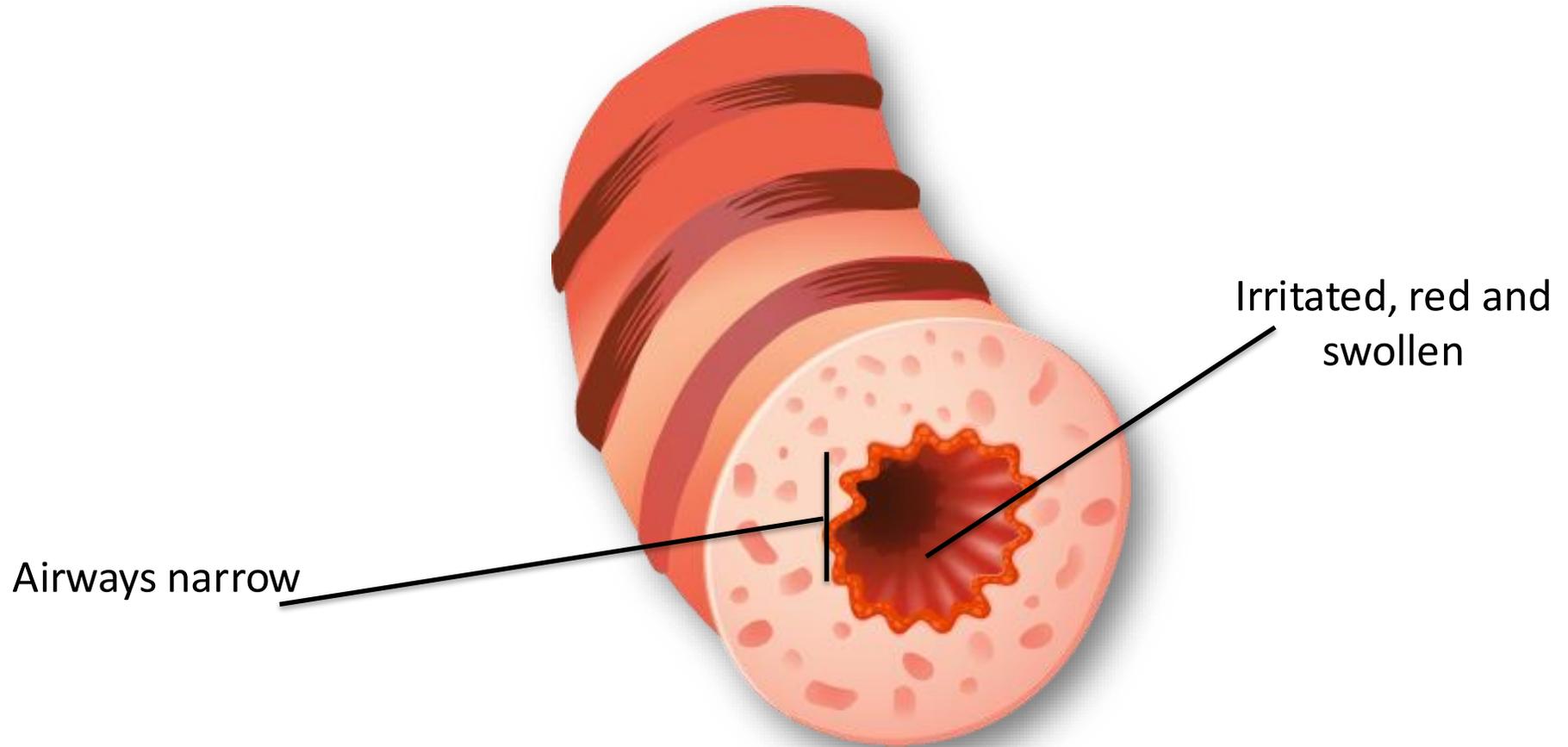
Healthy Airway



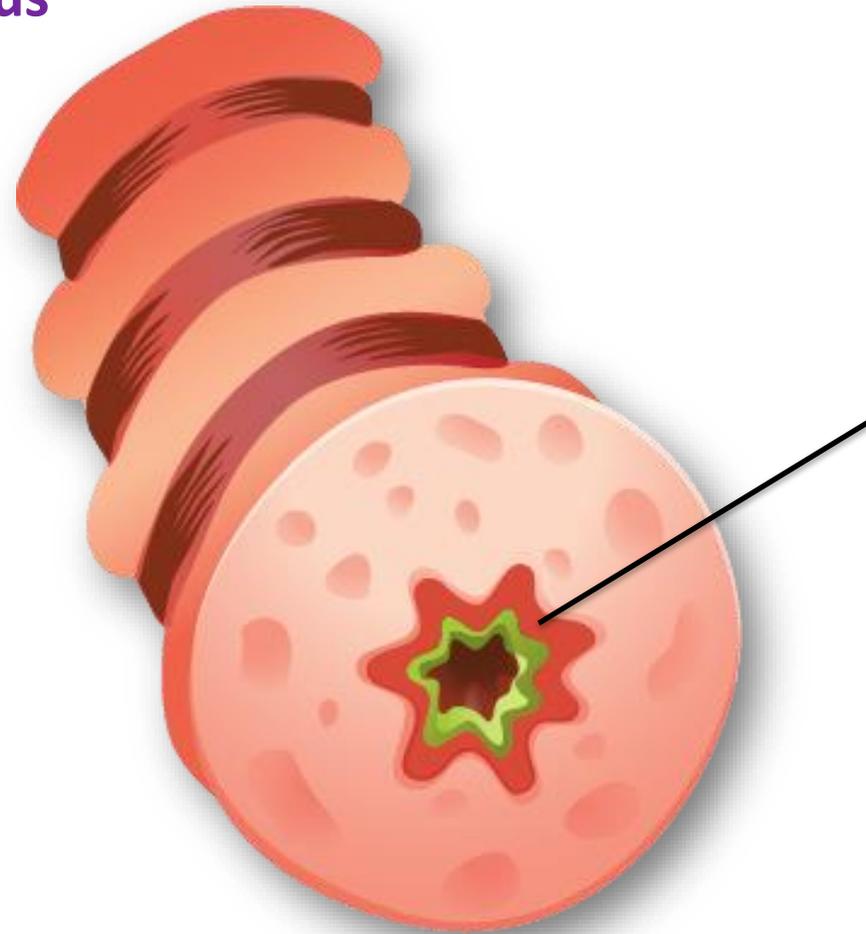
Bronchoconstriction



Inflammation



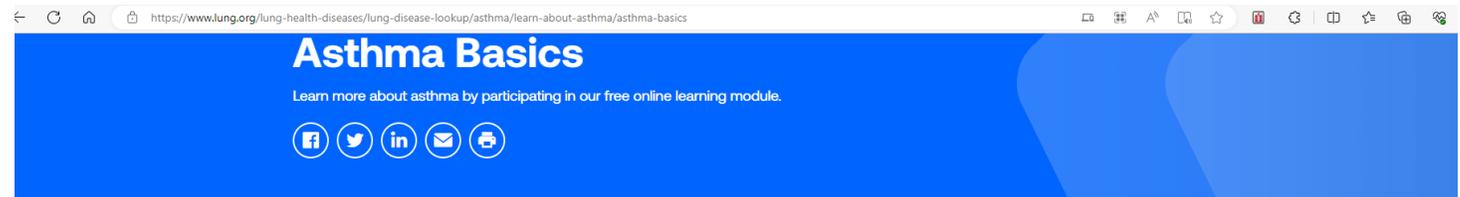
Increased Mucus



Secretion of mucus
blocks the airway

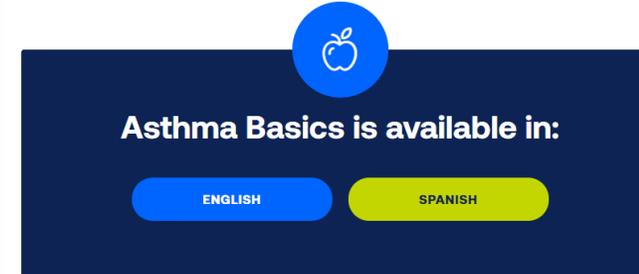
Asthma Basics Learning Module (American Lung Association)

<https://www.lung.org/lung-health-diseases/lung-disease-lookup/asthma/learn-about-asthma/asthma-basics>



Asthma
Learn About Asthma
What Is Asthma?
• Asthma Basics
Causes & Risk Factors
Types of Asthma
Asthma Research
Asthma Awareness Month
Symptoms & Diagnosis
Treatment
Managing Asthma
Finding Support
Resource Library
Health Professionals & Educators

The American Lung Association's Asthma Basics program is offered as a self-paced online learning module or an in-person workshop and designed to help people learn more about asthma. The program is ideal for frontline healthcare professionals, such as school nurses or community health workers, as well as individuals with asthma, parents of children with asthma, and co-workers, friends and family who want to learn more about asthma.



This program teaches participants to:

- Recognize and manage triggers,
- Understand the value of an asthma action plan, and
- Recognize and respond to a breathing emergency.

One of the highlights of the program is the [What Is Asthma? Animation](#) that shows the three primary changes in the airways during an asthma episode.

Asthma Basics also includes comprehensive resources, including asthma medication devices and demonstration videos and downloads.

Role of the School Nurse in Asthma Management

The school nurse is responsible for training school personnel regarding:

- the administration of needed medications
- response to a student's asthma symptoms
- minimizing asthma triggers

Asthma Management



Assessing Asthma Control

Asthma Control Tests (Validated Tools)

- **TRACK™ (Test for Respiratory and Asthma Control in Kids)** age < 5 years
 - caregiver completed questionnaire of respiratory control in preschool-aged children
 - only asthma control test for children < 4 years of age
- **C-ACT (Childhood Asthma Control Test)** ages 4-11 years
 - both self-reporting and parent report
- **ACT (Asthma Control Test™)** ≥ 12 years
 - self-reporting

TRACK™ Test for Respiratory and Asthma Control in Kids

Who should use TRACK?

This simple test can help determine if your child's breathing problems are not under control.

The test was designed for children who

- Are under 5 years of age **AND**
- Have a history of 2 or more episodes of wheezing, shortness of breath, or cough lasting more than 24 hours **AND**
- Have been previously prescribed bronchodilator medicines, also known as quick-relief medications (eg, albuterol, Ventolin®, Proventil®, Maxair®, ProAir®, or Xopenex®), for respiratory problems **OR** have been diagnosed with asthma

For kids under 5 years of age

How to take TRACK

Step 1: Make a check mark in the box below each of your selected answers.

Step 2: Write the number of your answer in the score box provided to the right of each question.

Step 3: Add up the numbers in the individual score boxes to obtain your child's total score.

Step 4: Take the test to your child's health care provider to talk about your child's total TRACK score.

					Score
1	During the <u>past 4 weeks</u> , how often was your child bothered by breathing problems, such as wheezing, coughing, or shortness of breath?				<input type="text"/>
	Not at all	Once or twice	Once every week	2 or 3 times a week	4 or more times a week
	<input type="checkbox"/> 20	<input type="checkbox"/> 15	<input type="checkbox"/> 10	<input type="checkbox"/> 5	<input type="checkbox"/> 0
2	During the <u>past 4 weeks</u> , how often did your child's breathing problems (wheezing, coughing, shortness of breath) wake him or her up at night?				<input type="text"/>
	Not at all	Once or twice	Once every week	2 or 3 times a week	4 or more times a week
	<input type="checkbox"/> 20	<input type="checkbox"/> 15	<input type="checkbox"/> 10	<input type="checkbox"/> 5	<input type="checkbox"/> 0
3	During the <u>past 4 weeks</u> , to what extent did your child's breathing problems, such as wheezing, coughing, or shortness of breath, interfere with his or her ability to play, go to school, or engage in usual activities that a child should be doing at his or her age?				<input type="text"/>
	Not at all	Slightly	Moderately	Quite a lot	Extremely
	<input type="checkbox"/> 20	<input type="checkbox"/> 15	<input type="checkbox"/> 10	<input type="checkbox"/> 5	<input type="checkbox"/> 0
4	During the <u>past 3 months</u> , how often did you need to treat your child's breathing problems (wheezing, coughing, shortness of breath) with quick-relief medications (albuterol, Ventolin®, Proventil®, Maxair®, ProAir®, Xopenex®, or Primatene® Mist)?				<input type="text"/>
	Not at all	Once or twice	Once every week	2 or 3 times a week	4 or more times a week
	<input type="checkbox"/> 20	<input type="checkbox"/> 15	<input type="checkbox"/> 10	<input type="checkbox"/> 5	<input type="checkbox"/> 0
5	During the <u>past 12 months</u> , how often did your child need to take oral corticosteroids (prednisone, prednisolone, Orapred®, Prelone®, or Decadron®) for breathing problems not controlled by other medications?				<input type="text"/>
	Never	Once	Twice	3 times	4 or more times
	<input type="checkbox"/> 20	<input type="checkbox"/> 15	<input type="checkbox"/> 10	<input type="checkbox"/> 5	<input type="checkbox"/> 0

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Total

Please see reverse side for an explanation of what your child's total TRACK score means.

Childhood Asthma Control Test for children 4 to 11 years old.

Know the score.

This test will provide a score that may help your doctor determine if your child's asthma treatment plan is working or if it might be time for a change.

How to take the Childhood Asthma Control Test

Step 1 Let your child respond to the first four questions (1 to 4). If your child needs help reading or understanding the question, you may help, but let your child select the response. Complete the remaining three questions (5 to 7) on your own and without letting your child's response influence your answers. There are no right or wrong answers.

Step 2 Write the number of each answer in the score box provided.

Step 3 Add up each score box for the total.

Step 4 Take the test to the doctor to talk about your child's total score.

19 or less
If your child's score is 19 or less, it may be a sign that your child's asthma is not controlled as well as it could be. No matter what the score, bring this test to your doctor to talk about your child's results.

Have your child complete these questions.

1. How is your asthma today?

 0 Very bad	 1 Bad	 2 Good	 3 Very good	SCORE <input type="text"/>
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2. How much of a problem is your asthma when you run, exercise or play sports?

 0 It's a big problem, I can't do what I want to do.	 1 It's a problem and I don't like it.	 2 It's a little problem but it's okay.	 3 It's not a problem.	<input type="text"/>
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3. Do you cough because of your asthma?

 0 Yes, all of the time.	 1 Yes, most of the time.	 2 Yes, some of the time.	 3 No, none of the time.	<input type="text"/>
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4. Do you wake up during the night because of your asthma?

 0 Yes, all of the time.	 1 Yes, most of the time.	 2 Yes, some of the time.	 3 No, none of the time.	<input type="text"/>
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Please complete the following questions on your own.

5. During the last 4 weeks, on average, how many days per month did your child have any daytime asthma symptoms?

5 Not at all	4 1-3 days/mo	3 4-10 days/mo	2 11-18 days/mo	1 19-24 days/mo	0 Everyday	<input type="text"/>
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6. During the last 4 weeks, on average, how many days per month did your child wheeze during the day because of asthma?

5 Not at all	4 1-3 days/mo	3 4-10 days/mo	2 11-18 days/mo	1 19-24 days/mo	0 Everyday	<input type="text"/>
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7. During the last 4 weeks, on average, how many days per month did your child wake up during the night because of asthma?

5 Not at all	4 1-3 days/mo	3 4-10 days/mo	2 11-18 days/mo	1 19-24 days/mo	0 Everyday	<input type="text"/>
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TOTAL

Please turn this page over to see what your child's total score means.

Asthma Control Test™ for teens 12 years and older. Know the score.

If your teen is 12 years or older have him take the test now and discuss the results with your doctor

Step 1 Write the number of each answer in the score box provided.

Step 2 Add up each score box for the total.

Step 3 Take the test to the doctor to talk about your child's total score.

1. In the past 4 weeks, how much of the time did your asthma keep you from getting as much done at work, school or at home?

All of the time	1	Most of the time	2	Some of the time	3	A little of the time	4	None of the time	5	<input type="text"/>
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2. During the past 4 weeks, how often have you had shortness of breath?

More than once a day	1	Once a day	2	3 to 5 times a week	3	Once or twice a week	4	Not at all	5	<input type="text"/>
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3. During the past 4 weeks, how often did your asthma symptoms (wheezing, coughing, shortness of breath, chest tightness, or pain) wake you up at night or earlier than usual in the morning?

4 or more nights a week	1	2 or 3 nights a week	2	Once a week	3	Once or twice	4	Not at all	5	<input type="text"/>
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4. During the past 4 weeks, how often have you used your rescue inhaler or nebulizer medication (such as albuterol)?

3 or more times per day	1	1 or 2 times per day	2	2 or 3 times per week	3	Once a week or less	4	Not at all	5	<input type="text"/>
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5. How would you rate your asthma control during the past 4 weeks?

Not controlled at all	1	Poorly controlled	2	Somewhat controlled	3	Well controlled	4	Completely controlled	5	<input type="text"/>
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AMERICAN LUNG ASSOCIATION. The American Lung Association supports the Asthma Control Test and wants everyone 12 years of age and older with asthma to take it.

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Total

What does it mean if my child scores 19 or less?

- If your child's score is 19 or less, it may be a sign that your child's asthma is not under control.
- Make an appointment to discuss your child's asthma score with their doctor. Ask if you should change your child's asthma treatment plan.
- Ask your child's doctor about daily long-term medications that can help control airway inflammation and constriction, the two main causes of asthma symptoms. Many children may need to treat both of these on a daily basis for the best asthma control.

Monitoring Symptoms

Early Warning Signs and Symptoms

- May progress to an asthma attack

Signs and Symptoms of Asthma Attack

- Not all students experience the same symptoms during an asthma attack

Early Warning Signs and Symptoms of Asthma

- persistent cough
- itchy throat or chin (tickle in throat)
- stomachache (younger children)
- grumpiness, irritability, agitation
- decrease appetite
- behavioral changes
- fatigue
- headache
- drop in peak flow meter
- less active than normal at recess or PE

Signs and Symptoms of an Asthma Attack

- becoming anxious or scared
- shortness of breath
- incessant coughing
- rapid labored breathing
- nasal flaring (young children)
- pulling-in of neck or chest with breathing (retractions)
- sweaty, clammy skin
- requiring rescue medications every four hours or more frequently
- tightness in chest (chest pain)
- wheezing while breathing in or out
- vomiting from hard coughing
- shoulders hunched over
- Unable to talk in full sentences

Asthma Triggers

Respiratory illnesses

Allergens

Weather

Irritants

Emotions

Exercise

Asthma Triggers

Respiratory Illnesses

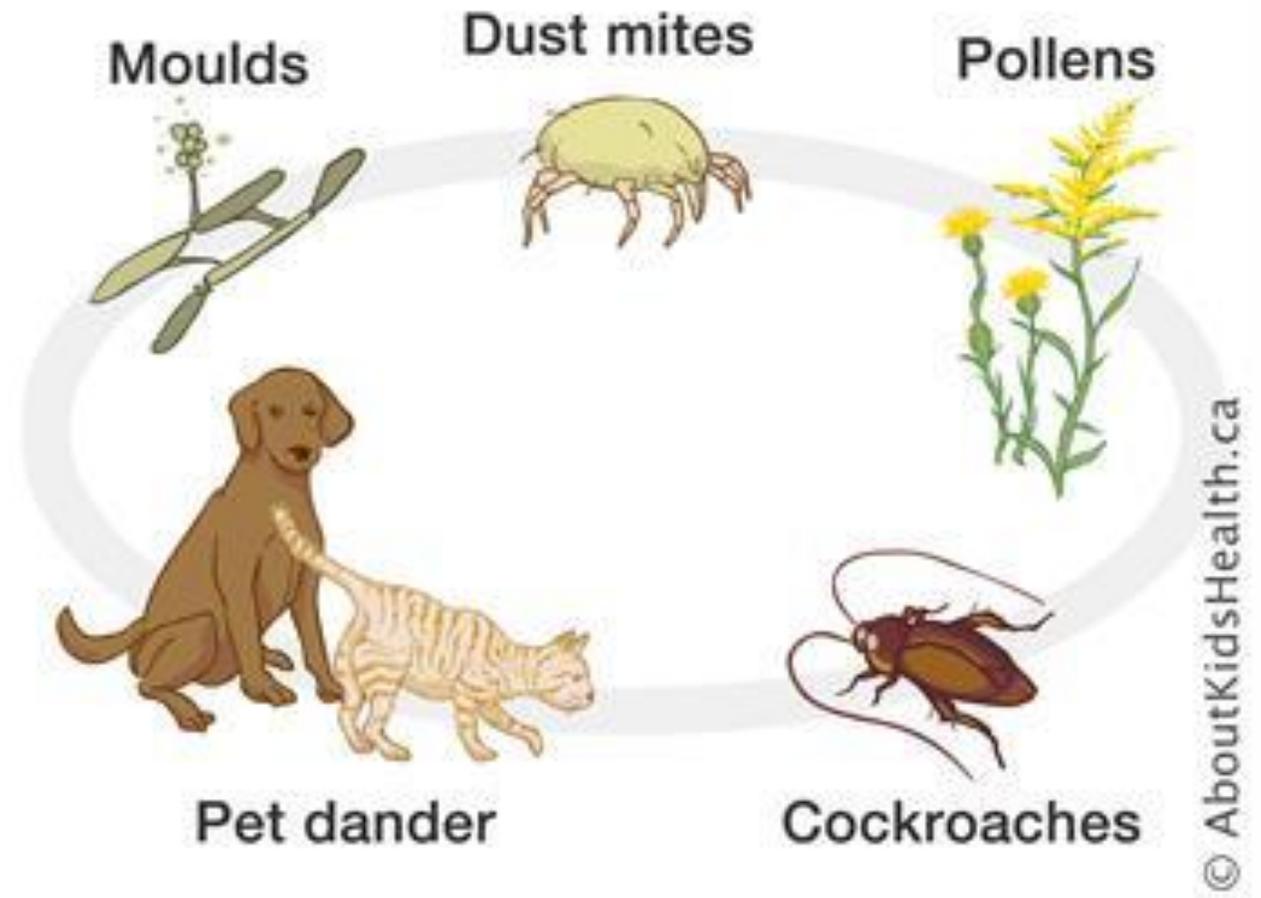
- Colds
- Viral infections
- Ear infections
- Sinus infections
- Bronchitis
- Pneumonia



Asthma Triggers

Allergens

- Pollen (trees, grasses, weeds)
- Animal dander (dogs, cats, birds, gerbils, mice, rats)
- Dust and dust mites
- Molds
- Cockroaches





Asthma Triggers

Weather

- Cold air
- Sudden changes in temperature
- Humidity

Asthma Triggers



Irritants

- Diesel exhaust
- Smoke (cigarette, wood)
- Air pollution
- Dust
- Air fresheners
- Perfumes
- Disinfectants
- Cleaners
- Laboratory and vocational education chemicals
- Art supplies
- Pesticides
- Chemical with volatile organic compounds (permanent & dry erase markers, paints, glues, cleaners)



Asthma Triggers

Emotions

- Laughter
- Crying
- Excitement
- Anxiety
- Tension
- Stress



Asthma Triggers

Exercise

- Exercise-Induced Bronchospasm (EIB)
 - While some students perceive symptoms of asthma only when exercising, EIB in the absence of other triggers is rare.
 - The student may have chronic airway inflammation and EIB is evidence of poor control.

Control Asthma Triggers in Schools

Recommendations for the Washington State
Department of Health

- Control Dust
- Reduce Animal Allergens,
& Dust Mites
- Reduce Chemicals
- Carpet Care



[Healthy Air Quality in Schools | Washington State Department of Health](#)

Control Dust

- Maintain cleanable surfaces and avoid clutter. Put loose items into plastic boxes with lids that can be wet-wiped.
- Damp-wipe surfaces weekly with a micro-fiber cloth.
- Don't hang items from the ceiling T-bars without special clips to prevent fraying fiberglass. Remove or clean items when dusty.
- Discourage clutter by removing as many unnecessary dust-collecting items as possible.
- Use pre-mixed and pre-wetted clay art supplies whenever possible to reduce dusts.
- Replace fabric upholstered furniture with furniture easily dusted.
- Remove area rugs that cannot be regularly cleaned and that trap dirt and moisture.

[Healthy Air Quality in Schools | Washington State Department of Health](#)

Reduce Animal Allergens, & Dust Mites

- Animals shouldn't be classroom residents and should only come to school for educational purposes.
- Use integrated pest management practices to prevent cockroach and rodent infestations.
- Store food in tightly sealed containers.
- Wash stuffed animals and blankets in hot water every two weeks or remove them.

[Healthy Air Quality in Schools | Washington State Department of Health](#)

Reduce Chemicals

- Don't use permanent, solvent-based or scented pens, markers, and board cleaners. Use water-based, unscented, crayon-based, or low-odor items.
- Don't use room deodorizing sprays, plug-ins, scented candle warmers, scented reeds, candles, incense, therapeutic oils, or potpourris.
- Don't bring chemicals, cleaners, or disinfectants from home. Use only those provided by the school or district.
- Disinfecting wipes (such as Clorox, Lysol) usually contain quats and fragrance chemicals. These ingredients can trigger asthma.
- Never use air-cleaning devices that generate ozone. Ozone is a respiratory irritant.
- Discourage the use of perfumes, colognes, body sprays and other strongly scented personal care products.

[Healthy Air Quality in Schools | Washington State Department of Health](#)

Carpet Care

- Whenever possible, don't allow food or beverages in classrooms. If possible, vacuum daily (when children are not present).
- Use a vacuum with a HEPA (high efficiency particulate air) filter – or use HEPA vacuum bags. Having both is even better.
- Avoid use of area rugs. They can trap moisture and dirt under them.

[Healthy Air Quality in Schools | Washington State Department of Health](#)

Idle-Free Schools Toolkit for a Healthy School Environment

What tools are available?

- [Idle-Free Schools Introductory Video](#) 
-  [Recommended Schedule \(pdf\)](#) (126.08 KB)
-  [Making it a Student Project \(pdf\)](#) (120.13 KB)
-  [Idle-Free Schools Presentation \(pdf\)](#) (2.83 MB)
-  [Clean School Bus Teachers Guide \(pdf\)](#) (494.21 KB)
-  [How to Conduct Observations \(docx\)](#) (19.85 KB)
-  [Sample Observation Form \(docx\)](#) (18.03 KB)
- Sample Idling Policies
 -  [For Passenger Vehicles and Delivery Trucks \(docx\)](#) (16.06 KB)
 -  [For School Buses \(Word version\) \(docx\)](#) (19.12 KB)
- Sample Letters
 -  [To Parents \(Word version\) \(docx\)](#) (17.44 KB)
 -  [To Teachers and Staff \(Word version\) \(docx\)](#) (19.37 KB)
 -  [To Delivery Truck Drivers \(Word version\) \(docx\)](#) (16.04 KB)

[Idle-Free Schools Toolkit for a Healthy School Environment | US EPA](#)

Additional Resources for Healthy Classrooms

[Classroom Cleaning Tips for Teachers | Washington State Department of Health](#)

[School Supply List Guidance for Health Classrooms](#)



School Supply List Guidance for Healthy Classrooms



School supply list items can have an impact on the health and safety of students in the classroom. Commonly used supplies can contain chemicals that trigger asthma and allergies in students. Below are options for safe supply list choices that will help to provide a healthier classroom environment. Be aware that some schools or districts have established additional policies and may prohibit certain classroom supplies. *Always* consult with your school or district to ensure compliance with internal policies.

Supply List Item	Recommended	Not Recommended
Cleaning wipes or baby wipes	Fragrance-free baby wipes, alcohol wipes, paper towels with soap and water or micro-fiber cloths.	Disinfectant wipes, scented baby wipes. Disinfectant wipes contain hazardous chemicals and cannot be used by students. Fragrances can trigger asthma and allergies.
Cleaners	Students: See "Recommended" above. Teachers: Only use school or district-approved or provided cleaners.* Green cleaners from EPA's Safer Choice list are recommended.**	Standard household cleaners containing harsh chemicals. Many common cleaning products contain hazardous chemicals and cannot be used by students.
Hand sanitizers	Handwashing is the best practice. If approved by school/district policy: alcohol-based sanitizer with at least 60% alcohol, fragrance-free and dye-free.	Fragranced, non-alcohol-based sanitizers with < 60% alcohol. Hand sanitizers are not effective against all viruses and bacteria and can irritate sensitive skin. Fragrances can trigger asthma and allergies.
Dry-erase markers	Low-odor, "AP certified non-toxic" markers, and dry-erase crayons.	Standard dry erase markers not labeled as low-odor. Standard dry erase markers can contain hazardous solvents, low-odor have less solvents, and dry-erase crayons have none.
Markers	Water-based and fragrance-free pens and markers.	Permanent markers and scented felt pens. Permanent markers can contain solvents and felt pens can contain fragrances, which can trigger asthma and allergies.
Room air fresheners	Provide increased fresh air and fans.	Any type of room fragrance such as essential oils, plug-ins, solids, and potpourri. Fragrances can trigger asthma and allergies and plug-in devices can be fire hazards.

*Classroom Cleaning Tips for Teachers: www.doh.wa.gov/CommunityandEnvironment/Schools/EnvironmentalHealth/ClassroomCleaning

**EPA's Safer Choice: www.epa.gov/saferchoice

Taking Medications

Metered Dose Inhalers (MDI)
Always require a spacer



For more videos,
handouts, tutorials and
resources, visit [Lung.org](https://www.lung.org).

Scan the QR Code to
access How-To Videos



Asthma Action Plan

Asthma Action Plan Selected to print

Nona Alaska Asthma Action Plan

MRN: 2020437

Description: 16 year old female

Severity: mild persistent

Triggers: smoke, odors, and sprays; pollen; respiratory infection; exercise

✓ Green Zone: Doing Well

- No cough, wheeze, chest tightness, or shortness of breath during the day or night
- Can do usual activities

Inhaled Medication	How much to take	When to take it
fluticasone (FLOVENT HFA) 110 MCG/ACT Aerosol	2 Puffs	Twice daily

Pre-Exercise Medication	How much to take	When to take it
albuterol (PROVENTIL HFA, VENTOLIN HFA) 90 mcg/act Aero Soln	2 Puffs	15 minutes before exercise

! Yellow Zone: Asthma is Getting Worse

- Cough, wheeze, tightness, or shortness of breath, or
- Waking at night due to asthma, or
- Can do some, but not all, usual activities,
- THEN follow the instructions, in the RED ZONE and call the doctor right away!

Inhaled Medication	How much to take	When to take it
albuterol (PROVENTIL HFA, VENTOLIN HFA) 90 mcg/act Aero Soln	2 Puffs	Every 4 hours PRN

! Red Zone: Medical Alert!

- Very short of breath, or
- Quick-relief medicines have not helped, or
- Cannot do usual activities, or
- Symptoms are getting worse after 24 hours in Yellow Zone
- Call 911 immediately if the following danger signs are present: Trouble walking/talking due to shortness of breath | Lips or fingernails are blue | Still in the Red Zone after 15 minutes

Inhaled Medication	How much to take	When to take it
albuterol (PROVENTIL HFA, VENTOLIN HFA) 90 mcg/act Aero Soln	2 Puffs	Every 15 minutes until you get help

Signed by: Albert Playground, MD

Signed on: 11/18/2024

Medications at School form



MRN: 21
Descript

Scarlet Alaska Asthma Action Plan - School Medication Form

SCHOOL YEAR 2024	SCHOOL Stadium High School
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ALASKA, SCARLET 6/26/07 has asthma and may need to take medication at school.
 The treatment plan for managing asthma at school is as follows:
 Asthma Severity: mild persistent
 Asthma Triggers: pollen, respiratory infection

Patient's Pre-Exercise Medication albuterol (PROVENTIL HFA, VENTOLIN HFA) 90 mcg/act Aero Soln	Pre-Exercise Medication Dose 2 Puffs
Patient's Inhaled Medication albuterol (PROVENTIL HFA, VENTOLIN HFA) 90 mcg/act Aero Soln	Inhaled Medication Dose 2 Puffs

Student recognizes symptoms of asthma and will seek assistance if needed.
 Student may carry and self-administer the medication ordered above.
 Student is to inform school nurse if using albuterol inhaler more than 4 times/day.
 Student has been instructed in use of device needed to administer medication.
 Student has demonstrated the skill level necessary to use the medication appropriately.

Health Care Provider's Signature	Date:
Health Care Provider's Printed Name	Phone:

THIS AUTHORIZATION IS GOOD FOR THE CURRENT SCHOOL YEAR ONLY. (Summer School if applicable)

Parent/Guardian's Permission
 I request that the school nurse, principal, or designated staff member be permitted to discuss my child's medical issues with health care providers and to administer to my child, **Scarlet Alaska**, or allow my child to carry and self-administer as indicated above, the medication prescribed by (**Playground, Albert, MD**). The medication is to be furnished by me in the original container labeled by the pharmacy or health care provider with the name of the medicine, the amount to be taken, and when it should be taken. The health care provider's name is on the label. I understand that my signature indicates my understanding that the school accepts no liability for untoward reactions when the medication is administered, or my child self-administers, in accordance with the health care provider's directions. If notified by school personnel that medication remains at the end of the school year, **I will collect the medication from the school or understand that it will be destroyed.** I am the parent or the legal guardian of the child named.

Parent/Guardian Signature	Date:
Phone Contacts	Home: Cell: Other:

THANK YOU FOR YOUR ASSISTANCE. PLEASE RETURN COMPLETED FORM TO SCHOOL NURSE.

School Nurse Signature	Date:
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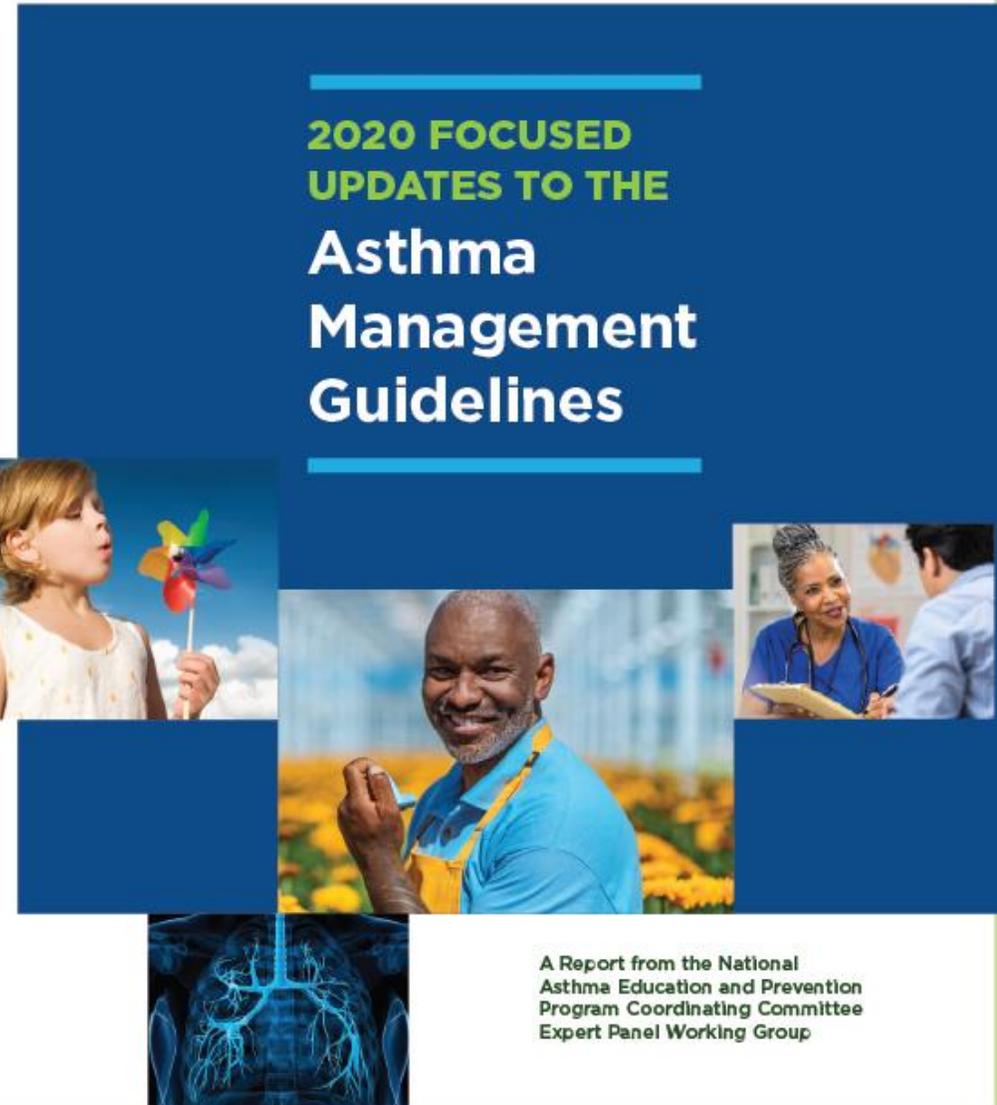
NHLBI Guideline 2020 Updates

National Heart Lung Blood Institute (NHLBI)

13 years since the last revision

Stepwise Approach

Clinician escalates treatment as needed by moving to a higher step then deescalates treatment by moving to a lower step once asthma is well controlled for at least 3 consecutive months.



U.S. Department of Health and Human Services
National Institutes of Health
National Heart, Lung, and Blood Institute

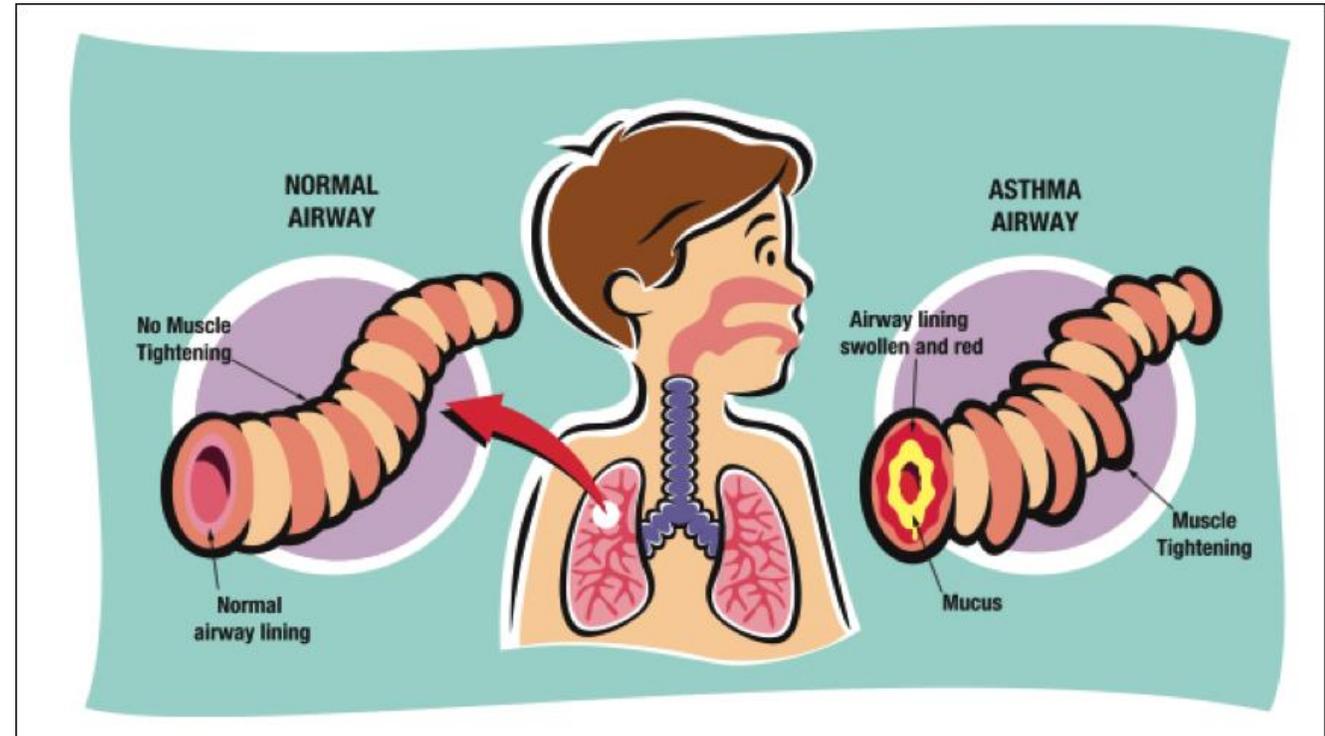
Asthma Severity Rating

Intermittent

Mild Persistent

Moderate Persistent

Severe Persistent



2020 Focused Updates to the Asthma Management Guidelines (Ages 5-11 Years)

AGES 5-11 YEARS: STEPWISE APPROACH FOR MANAGEMENT OF ASTHMA

	Intermittent Asthma		Management of Persistent Asthma in Individuals Ages 5-11 Years			
Treatment	STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6
Preferred	PRN SABA	Daily low-dose ICS and PRN SABA	Daily and PRN combination low-dose ICS-formoterol▲	Daily and PRN combination medium-dose ICS-formoterol▲	Daily high-dose ICS-LABA and PRN SABA	Daily high-dose ICS-LABA + oral systemic corticosteroid and PRN SABA
Alternative		Daily LTRA,* or Cromolyn,* or Nedocromil,* or Theophylline,* and PRN SABA	Daily medium-dose ICS and PRN SABA or Daily low-dose ICS-LABA, or daily low-dose ICS + LTRA,* or daily low-dose ICS + Theophylline,* and PRN SABA	Daily medium-dose ICS-LABA and PRN SABA or Daily medium-dose ICS + LTRA* or daily medium-dose ICS + Theophylline,* and PRN SABA	Daily high-dose ICS + LTRA* or daily high-dose ICS + Theophylline,* and PRN SABA	Daily high-dose ICS + LTRA* + oral systemic corticosteroid or daily high-dose ICS + Theophylline* + oral systemic corticosteroid, and PRN SABA

2020 Focused Updates to the Asthma Management Guidelines (Ages 12+ Years)

AGES 12+ YEARS: STEPWISE APPROACH FOR MANAGEMENT OF ASTHMA

	Intermittent Asthma		Management of Persistent Asthma In Individuals Ages 12+ Years			
Treatment	STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6 [■]
Preferred	PRN SABA	Daily low-dose ICS and PRN SABA or PRN concomitant ICS and SABA ▲	Daily and PRN combination low-dose ICS-formoterol ▲	Daily and PRN combination medium-dose ICS-formoterol ▲	Daily medium-high dose ICS-LABA + LAMA and PRN SABA ▲	Daily high-dose ICS-LABA + oral systemic corticosteroids + PRN SABA
Alternative		Daily LTRA* and PRN SABA or Cromolyn,* or Nedocromil,* or Zileuton,* or Theophylline,* and PRN SABA	Daily medium-dose ICS and PRN SABA or Daily low-dose ICS-LABA, or daily low-dose ICS + LAMA, ▲ or daily low-dose ICS + LTRA,* and PRN SABA or Daily low-dose ICS + Theophylline* or Zileuton,* and PRN SABA	Daily medium-dose ICS-LABA or daily medium-dose ICS + LAMA, and PRN SABA ▲ or Daily medium-dose ICS + LTRA,* or daily medium-dose ICS + Theophylline,* or daily medium-dose ICS + Zileuton,* and PRN SABA	Daily medium-high dose ICS-LABA or daily high-dose ICS + LTRA,* and PRN SABA	

Asthma Medications

Long-term Control Medications

Work slowly over time to prevent episodes from occurring.

- Inhaled corticosteroids (ICS)
- Long-acting beta-agonist
- Combination of inhaled corticosteroids and long-acting beta-agonists

Used daily even when feeling well

Quick Relief Medications

Work quickly to relieve symptoms usually within 30 minutes.

- Short acting beta agonist (SABA)

If need it more than 2x per week, notify Primary Care Provider

SMART Therapy

Single Maintenance and Reliever Therapy

Ages 5-11 Years & Ages 12+ Years

- Steps 3 and 4
- For individuals with moderate to severe persistent asthma already taking low- or medium- dose ICS
- Preferred treatment is a single inhaler with ICS-formoterol
- SMART used for controller therapy AND quick-relief therapy.

<https://www.nhlbi.nih.gov/health-topics/asthma-management-guidelines-2020-updates>

Current SMART Therapy Options

Symbicort

(budesonide and formoterol)



6-11 yr: 80/4.5, 2 puffs twice daily
≥ 12 yr: 80-160/4.5, 2 puffs twice daily
Max doses/day 8 for children; 12 for adults

Dulera

(mometasone and formoterol)



5-11 yr: 50/5, 2 puffs twice daily
≥ 12 yr 100-200/5, 2 puffs twice daily
Max doses/day 8 for children 12 for adults

New Asthma Medication

AIRSUPRA

(Albuterol +
Budesonide)



AIRSUPRA

VS



Albuterol only

	Treats asthma symptoms	
	Helps prevent asthma attacks	

Combines a short-acting-beta-agonist (SABA) with an inhaled corticosteroid (ICS)



Resources for Asthma Management in the Educational Setting

Mary Bridge School Health Resources Webpage

- [School Health Resources - Mary Bridge Children's](#)

Bree Collaboration Pediatric Asthma Guidelines

- [Bree-Pediatric-Asthma-Report-Final.pdf \(qualityhealth.org\)](#)

American Lung Association/Asthma Basics

- [Asthma Basics | American Lung Association](#)

Healthy Air Quality in Schools/DOH

- [Healthy Air Quality in Schools | Washington State Department of Health](#)

Asthma Management in Educational Setting

- [Taking Asthma Care to School \(www.k12.wa.us\)](#)

Healthy Schools Checklist/ US EPA

- [Healthy Schools Checklist | US EPA](#)

School Health Resources

[Home](#) > [Patients & Visitors](#) > [Patient & Family Support Services](#) > [Bessler Center](#) > [School Health Resources](#)

School Health Resources

Children learn best when they are healthy. From support and resources for school nurses, to School-Based Health Clinics, Mary Bridge Children's and the Bessler Center are helping build a healthier future.



Patient & Family Support Services

A health strategy of the Bessler Center

School Health Resources

← ↻ 🏠 🔒 <https://www.marybridge.org/patients-visitors/patient-family-support-services/bessler-center/school-health/> A🗨

- **Equity.** We believe that every child deserves quality care access. School health programs and supports enhance care access where children live, learn and play. By providing school nurses with essential health care resources, we seek to assure that any child treated at school will have access to care close to home, when they need it.

As a community health program, the Bessler Center at Mary Bridge Children’s utilizes the Children’s Hospitals Association school partnerships and School Friendly Health Systems frameworks. Detail on the guiding principles within these frameworks may be found here:

- [A Guide to Enhancing School Partnerships \(childrenshospitals.org\)](#)
- [School-Friendly Health Systems \(cmhnetwork.org\)](#)



Health condition education

- Asthma** ▼
- Adrenal crisis** ▼
- Diabetes** ▼
- Epilepsy and seizure disorders** ▼
- Gastrointestinal (GI) issues** ▼
- Genitourinary Support** ▼

References

1. American Lung Association. (2023). Asthma | American Lung Association. Www.lung.org. <https://www.lung.org/lung-health-diseases/lung-disease-lookup/asthma>.
2. National Heart, Lung, and Blood Institute. (2020). 2020 Focused Updates to the Asthma Management Guidelines | NHLBI, NIH. Www.nhlbi.nih.gov. <https://www.nhlbi.nih.gov/health-topics/asthma-management-guidelines-2020-updates>.
3. National Asthma Education and Prevention Program. (2007). National Heart, Lung, and Blood Institute national asthma education and prevention program expert panel report 3: Guidelines for the diagnosis and management of asthma Full report 2007. https://www.nhlbi.nih.gov/sites/default/files/media/docs/EPR-3_Asthma_Full_Report_2007.pdf.
4. Pediatric Asthma. (2023). <https://www.qualityhealth.org/bree/wp-content/uploads/sites/8/2023/01/Bree-Pediatric-Asthma-Report-Final.pdf>.

Evaluation

