THE COMMON COLD HANDOUT

The common cold, also called an upper respiratory infection (URI) is most commonly caused by the rhinovirus but can also be caused by the corona virus, respiratory syncytial virus (RSV), influenza virus, parainfluenza virus, metapneumovirus and adenovirus. Infections are more common during the "cold season" from September to May but can occur year round.

The reason colds are considered common is that the average preschool child will get 5-9 colds a year and 10% to 15% of children will get 12 colds a year. Most of these occur during the "cold season," so it seems as if some children have a cold all winter long. Adults get an average of 2-3 colds a year. Colds cause more than 25 million lost school days and 21 million lost work days and account for about 14 % of visits to doctors. Americans spend more than 1 billion dollars a year on cold medicines. (1990 figures).

Symptoms begin 1-2 days following infection and peak at 2 to 4 day. Most symptoms are gone by 7 days in adults but will last about 14 days in children. Nasal congestion, runny nose and sore throat are early symptoms. The sore or scratchy throat usually only last a few days. Cough usually peaks at about 4-5 days in 30% of children about the time the discharge from the nose changes from watery to thick and yellow or green. Fever is unusual in adults but in children it is common to have a low grade (101-102º) fever during the first 1-3 days of the illness. Remember that strep throat doesn't cause runny nose, cough or hoarseness. Mild diarrhea and occasional vomiting is common with a cold. Sometimes the child coughs so hard it causes him to gag and throw up. If one swallows a lot of mucous it can upset the stomach and cause vomiting.

The child becomes less contagious after the first 7 days but 10% to 20% of children are still shedding the virus after 2-3 weeks. Children in day care tend to get ill (all kinds of illness) about 40% more than those who don't attend. The infection rate from one spouse to another is about 40%. The rhinovirus most commonly passes from person to person by direct contact such as hand to hand or from an infected person touching a doorknob or toy which another person then touches. It is less commonly passed by coughing into someone's nose or eyes. The virus can survive for several hours on the hands and several days on objects.

Treating a cold

There is no cure for the common cold. Various products, including echinacea (derived from the cone flower) and vitamin C have been proven ineffective in alleviating the severity or duration of colds. The use of zinc as a lozenge or pill, nasal spray or a medicated swab inserted in the nose has produced conflicting results in the studies that have been done.
Symptomatic treatment of a cold in children is problematic for three reasons:

1) The dose of the ingredients used in most cold medicines in children has not been established.
2) Studies have not shown much improvement in symptoms of children taking cold medicines.
3) There have been rare deaths in children taking cold medicines.

The ingredients used in children's cold medicines were determined by the Food and Drug Administration (FDA) over 30 years ago to be "generally recognized as safe and effective," and were approved for over-the-counter sales. If you have any concerns about the safety of cold medicines ask me for a handout on the subject.

What medicines are used for treating the common cold?

DECONGESTANTS—are medicines that cause the blood vessels in the lining of the nose to constrict leading to shrinkage of the swollen air passage allowing one to breathe better. Decongestants are mild stimulants similar to caffeine that can cause jitteriness, insomnia, increase in heart rate and slight elevation in blood pressure. **Pseudoephedrine** was the decongestant used in most cold medicines until 2006 when laws were passed requiring pharmacies to put all products containing it behind the counter because it was being used as an ingredient in making methamphetamine. Since most drug companies didn't want their customers to have to go through the trouble of getting their cold medications from the pharmacist they changed their decongestant to on inferior one called **phenylephrine**.
ANTIHISTAMINES—are medications that are used primarily for allergy but some of the older antihistamines have a side effect of causing a runny nose to dry up. They tend to make people drowsy and therefore tend to offset the stimulant effect of the decongestants. The antihistamines most commonly used in cold medicines are **diphenhydramine** (Benadryl), **chlorphenirmine**, **brompheniramine** and **promethazine** (Phenergan). The non-sedating antihistamines like Zyrtec, Claritin and Allegra do not help the runny nose from a cold.
COUGH MEDICINES: Almost all over-the-counter cough medicines contain **dextromethorphan**. That's the DM behind Dimetapp DM, Triaminic DM, Robitussin DM etc.
Codeine is used in many prescription cold and cough medicines and I think it is a stronger cough medicine than dextromethorphan although studies have not shown this to be the case.
Hydrocodone (like in Histussin HC, Tussionex and Histionex) is reported to be 3 times stronger than codeine. It's also a strong pain medication found in Lortab. It has more propensity to cause dependency than codeine so I limit how much and how often I prescribe it. All these cough medicines can cause upset stomach, dizziness, drowsiness and respiratory depression. A recent study showed that **honey** helped relieve cough in children 2-18 years of age. I don't recommend suppressing the cough in a child that has asthma, bronchiolitis or pneumonia. It is important that they cough up the mucous.
EXPECTORANTS: The only expectorant that is used any more is **guiafenesin**. Its purpose is to thin out the mucous. It works by irritating the stomach which then causes a reflex increase in secretions of the airway. My experience and studies have shown no benefit from it.
SALT WATER NOSE DROPS are of very limited value but can be of help in the newborn with a stuffy nose. The mistake most people make is not using enough. I recommend putting about 10 drops in each nostril. The other mistake most people make is trying to suction it out with a bulb syringe. Most of the time it will run into the throat and be swallowed. A bulb syringe can be used at times, but too frequent or too vigorous use can cause nose bleeds and swelling of the lining of the nose which will make the congestion worse. You can make your own nose drops by putting ¼ tsp salt in 1 cup of boiled water or you can buy it ready to use.
FEVER MEDICATIONS like acetaminophen (Tylenol) and ibuprofen (Advil, Motrin) can be used for fever or pain.

Humidifiers are mentioned here, not because they are a medication but, because I don't think they do any good. I have to admit I still use them for croup out of years of habit but I don't recommend them for colds, bronchitis, pneumonia or asthma. If you do use one be sure to put distilled water in it and change and clean it often so mold doesn't grow in it. Don't put any kind of medicine in it.

Do I believe cold medicines are safe when used in the recommended doses? Absolutely!

Do I believe cold medicines work? After being a pediatrician for 34 years and having raised 7 children myself I believe they work if the right amount is given which is sometimes higher than the recommended dose.

These are my recommendations:

1—Follow these 12 recommendations from the FDA:

- Do ***not*** use cough and cold products in children under 2 years of age UNLESS given specific directions to do so by a healthcare provider.

- Do not give children medicine that is packaged and made for adults. Use only products marked for use in babies, infants or children (sometimes called "pediatric" use).

- Cough and cold medicines come in many different strengths. If you are unsure about the right product for your child, ask a healthcare provider.

- If other medicines (over-the-counter or prescription) are being given to a child, the child's healthcare provider should review and approve their combined use.

- Read all of the information in the "Drug Facts" box on the package label so that you know the ***active ingredients*** and the ***warnings***.

- Follow the ***directions*** in the "Drug Facts" box. Do not give a child medicine more often or in greater amounts than is stated on the package.

- Too much medicine may lead to serious and life-threatening side effects, particularly in children aged 2 years and younger.

- For liquid products, parents should use the measuring device (dropper, dosing cup or dosing spoon) that is packaged with each different medicine formulation and that is marked to deliver the recommended dose. A kitchen teaspoon or tablespoon is not an appropriate measuring device for giving medicines to children. They can hold between 2 to 10 ml.

- If a measuring device is not included with the product, parents should purchase one at the pharmacy. Make sure that the dropper, dosing cup or dosing spoon has markings on it that match the dosing that is in the ***directions*** in the "Drug Facts" box on the package label, or is recommended by the child's health care provider.

- If you DO NOT UNDERSTAND the instructions on the product, or how to use the dosing device (dropper, dosing cup or dosing spoon), DO NOT USE the medicine. Consult your healthcare provider if you have questions or are confused.

- Cough and cold medicines only treat the symptoms of the common cold such as runny nose, congestion, fever, aches, and irritability. They do not cure the common cold. Children get better with time.

- If a child's condition worsens or does not improve, stop using the product and immediately take the child to a health care provider for evaluation.

2—**I recommend the following medicines** because: (1) They contain the recommended medicines in the recommended concentrations. (2) They are available in all stores that sell cold meds. (3) They come in generic brands that don't cost as much as name brands. (4) They contain only the medications that I think are necessary. (5) Dimetapp taste good. It is alright to give a store brand of these medicines but compare the labels to make sure they have identical ingredients and strengths. Don't use the infant preparations. They usually come with a dropper and are more concentrated.

Use **Dimetapp Elixir Cold and Allergy** for the child with a runny or congested nose**, Dimetapp DM Cough and Cold** for the child with a runny or congested nose and cough and **Mucinex Cough or Benylin Pediatric Cough Suppressant** for just cough.

Age 2-6 give 5ml (1 teaspoon) every 4 to 6 hours but no more than 4 doses in 24 hours.

Age 6-11 give 10ml (2 teaspoons) every 4-6 hours but no more than 4 doses in 24 hours.

Age 12-adult give 15-20ml (3-4 teaspoons) every 4-6 hours. Up to 4 doses in 24 hours.

3—For the 12-Adult age patient I recommend **Drixoral Cold and Allergy** for runny or congested nose. It contains pseudoephedrine and an antihistamine. It lasts for 12 hours. If the antihistamine makes you too drowsy you can take **Sudafed-12 hour capsules**. Some people take Sudafed during the day and Drixoral at night. Remember, products that contain pseudoephedrine are kept behind the drug store counter. For cough I recommend the **Robitussin Cough Gels**. Take 2 capsules every 6-8 hours.

4—Don't give any cold medicines that contain any other products such as acetaminophen (Tylenol), ibuprofen (Advil/Motrin) or guiafenesin (Mucinex and liquid Robitussins) except Mucinex Cough.

5—Don't give Nyquil, Dayquil, adult formulas, night-time formulas, extra-strength formulas, flu-formulas, cough and chest formulas, severe cough formulas, strips that dissolve on the tongue, medicated nasal sprays, Benedryl or any prescription cold medicine without consulting me first**.** Vicks Vapo Rub, Mentholatum, throat lozenges, medications put in humidifiers and cough drops all smell and taste like medicine but do little good.

What are the complications that can come from a cold?

Ear infection occurs in 5 to 15 percent of young children who get a cold. Some children seem to have a tendency to get ear infections every time they catch a cold and some children never get them. Signs of ear infection are excessive crying, discharge from the ear or complaining of pain. Fever is not a reliable sign and neither is pulling the ears. If a child has a cold and develops a green or yellow discharge from the eyes look for signs of ear infection….they seem to go together quite often.

To have a **green or yellow discharge from the eyes** during a cold is common and will go away as the cold goes away. If the eyes are stuck together or the eyes are getting red call my nurse for a prescription eye drop.

Sinus infection probably occurs, to some degree, in most people that catch a cold and will usually go away without an antibiotic. A green or yellow discharge from the nose does not indicate a need for an

antibiotic. Pain over the sinus area or cold symptoms that last more than 10-14 days would suggest a sinus infection that may need treatment.

Croup is caused by inflammation of the upper part of the airway (the larynx) which causes a cough that sounds like a seal barking, hoarse voice and stridor (trouble getting air in). It is most commonly caused by the parainfluenza virus. Call our office if your child has croup.

Bronchitis: Text books do not have a definition for acute bronchitis. I suspect anyone that has much of a cough has some degree of bronchitis. Bronchitis can vary in severity from a mild chest cold to almost pneumonia. One can have viral bronchitis or bacterial bronchitis. Viral bronchitis will go away by itself. I suspect bacterial bronchitis in a child with a bad or prolonged (greater than 10 days) cough or who is coughing up colored sputum or having chest pain in the mid chest. The presence of fever would also suggest a bacterial bronchitis.

Bronchiolitis is caused by inflammation deeper in the airways than bronchitis. It causes wheezing as if the child is having an asthma attack. It primarily affects children under 18 months of age and is most commonly caused by the respiratory syncytial virus (RSV) or metapneumovirus.

Pneumonia is usually preceded by a cold that then goes into bronchitis then pneumonia but one can have pneumonia without a cold and without cough. Pneumonia can be either viral or bacterial. Viral pneumonia will usually go away by itself. Suspect bacterial pneumonia in any child with a cough and fever past the first 3 days of a cold, a child who is breathing faster than normal (over 60 breaths per minute up to 6 months, 40/min from 6-12 months and 30/min thereafter) or chest pain. Bad cough plus high (104-105º) fever is pneumonia until proven otherwise.

Influenza (Flu) is similar to a cold in that it can cause cough and congestion but people with flu are much sicker with fever to 103º to 105º that can last for more than 5 days, muscle aches, worse sore throat and red eyes. Gastroenteritis (vomiting and diarrhea) is sometimes erroneously called flu. Yearly flu shots are recommended for all children from 6 to 59 months of age and are available for all ages.

Asthma: The most common thing to trigger an asthma attack is catching a cold.

When to call the doctor

Trouble breathing (other than just having a stuffy nose) manifest by trouble getting air in (stridor) or wheezing or retractions (sucking in beneath lower ribs), rapid breathing or a grunting sound.

Fever over 102º during the first 3 days of the illness or any fever past the first 3 days.

Ear pain or chest pain.

Coughing up yellow, green, brown or bloody mucous.

Listlessness is just as worrisome as a high fever.

A stiff neck (pain when the chin is touched to the chest), or bulging soft spot in infants can be a sign of meningitis. Worry if child has a severe headache that will not go away.

Pus on the tonsils or enlarged, tender lymph nodes in the neck.

Cough or congestion that lasts more than two weeks.

When can a child with a cold return to school or daycare?

As far as being contagious to class mates, the viruses can be shed for up to 3 weeks. Of course, if we kept every child that got a cold home for three week there would be very few children in school.

I would keep a child out of school until they appear to feel well enough to return, have no fever and do not have much of a cough. If a child has a bad cough the parents will often be called to come get him.

How can one reduce their chances of catching a cold?

1—Avoid crowds and people who are sick.

2—Avoid touching your nose and eyes with your hands.

3—Wash your hands after coming in contact with someone who is ill, such as wiping a child's runny nose. To be effective you need to wash for 30 seconds. Hand sanitizers will kill some viruses but not all.

4—Get enough rest and avoid overstressing your body. Note: Going out in the cold weather does not cause one to catch colds.

5—Cover your mouth when you cough or sneeze.

6—Don't share toothpaste or toothbrushes. Don't keep toothbrushes together where they can touch. It's a good idea to put toothbrushes in dish washer once a week.

7—Clean telephone headsets, door knobs and keyboards with something like Lysol regularly.

Note: This handout reflects Dr. Hacking's opinions and recommendations and is not endorsed by Utah Valley Pediatrics or any of the doctors that work in my organization. It will probably need to be updated as events and information change.

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