On the Airwaves! Dr. Kardos talks about the latest in pediatrics on “Your Radio Doctor”

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Listen here as Dr. Kardos talks about the latest in pediatrics on “Your Radio Doctor” with Dr. Maryanne Ritchie.

Julie Kardos, MD and Naline Lai, MD

Tylenol or Advil?

A spoonful of sugar or a spoonful of stevia?

What's better to give my child, Tylenol or Advil? Acetaminophen or Ibuprofen?

We really shouldn't be using brand names, but this question comes up often, and just like Kleenex or Band-aid or Post-it, we more often hear parents refer to the brand names than the generic names.

Tylenol is a brand name for acetaminophen. Sometimes on medicine labels it is listed as APAP.

Motrin and Advil are brand names for ibuprofen.

Acetaminophen and ibuprofen are the SAME in these two effects:

Both treat pain.
Both lower fever.

Here is how acetaminophen and ibuprofen are DIFFERENT:

1. Acetaminophen is digested by the liver, and ibuprofen is digested by the kidneys.
2. The dosing is different. Acetaminophen is dosed at 15mg/kg of your child's weight, with a maximum dose of 650mg (2 adult "regular strength" tablets). Ibuprofen is dosed at 10mg/kg of your child's weight with a maximum dose of 400mg (2 adult tablets), unless your child's doctor directs you otherwise. Some kids can have higher doses.
3. Acetaminophen effects last about 4-6 hours, while ibuprofen effects last 6-8 hours. So you can give a dose of acetaminophen every 4 hours and ibuprofen every 6 hours.
4. Acetaminophen can be given to babies down to 2 months of age. We generally wait until 6 months to give ibuprofen. This is because studies of safety and usefulness of ibuprofen in younger babies have not been conducted. So if your child needs pain or fever medicine and is younger than 6 months old, give acetaminophen.
5. Acetaminophen comes in several forms: as a liquid, pill, and suppository. Ibuprofen comes in liquid and pill form but has no suppository option. Suppositories are useful in kids who cannot or will not take the oral formulation.

Ibuprofen is an "anti-inflammatory" medicine. That means it decreases inflammation. So if your child has an inflamed

throat or ear infection, very sore muscles or a sprained, swollen ankle, ibuprofen is the better choice because you get the pain relief plus the “anti-inflammation” properties of the medicine.

Should I alternate acetaminophen with ibuprofen?

For treating fever, planned alternation of the two may lead to dosing confusion. To avoid the risk of accidentally overdosing your child, we suggest that parents just pick one medicine and stick with it. Many parents have “fever phobia” and for this we strongly encourage you to check out our post about fever. The goal is not to lower fever but to help your child feel better. In fact, while one study suggests that alternating the two MAY lead to better fever control, there is not enough evidence for the American Academy of Pediatrics to recommend either way.

For treating pain, planned alternation may be helpful. One of Dr. Kardos’s patients recently sprained his ankle. To get him through the night, she had the parent give tylenol, then 3 hours later give ibuprofen, then 3 hours later give tylenol, then 3 hours later give ibuprofen. When you break this down, the patient got acetaminophen every 6 hours and ibuprofen every 6 hours, and because they were staggered, the parent could give the next medicine dose before the prior one wore off. In situations of pain, this alternating of medicine plan helped avoid the need for prescription pain medicine.

How is the liquid medicine formulated? How do I measure out the dose?

In the United States, **Infant Tylenol** and **Children’s Tylenol** come as a liquid form in the concentration, or “thickness,” of 160mg per 5ml. That means that you get 160mg of acetaminophen in every 5 ml that you measure out. Yes, both infant and children’s Tylenol liquid are 160mg per 5ml. Consumer alert: The “infant” formulation comes in a smaller bottle and the

children’s form comes in a larger bottle, yet typically the infant form is more expensive. Go figure.

Children’s liquid Ibuprofen comes in two different concentrations or “thicknesses.” One is for babies and comes with a medicine dropper, and one is for older kids and comes with a cup for dosing. Read the label carefully and use the measuring device (dropper or cup) that comes with the medicine.

Are there side effects?

Just like all medicine, acetaminophen and ibuprofen can cause side effects, and in rare instances, allergic reactions. So you should have a valid reason for using them that is more important than the possible side effects. Again, both treat pain and treat discomfort from fever. If your child has a fever but is otherwise comfortable, you do not have to treat the fever just for the sake of lowering it. If your child has a liver or kidney disease, your child’s doctor might want you to avoid one or the other medicine, so ask before you dose your child.

Both medicines, even though they are over-the-counter, are toxic if overdosed. Be sure your child can’t get into either one by mistake, and if they do, call poison control immediately: 1800-222-1222.

Which one do we recommend over the other?

Tylenol or Advil? The answer: it depends what you are treating, how long you want the symptoms controlled, and which medicine your child tolerates better.

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How sick is sick? When to call your child's doctor about illness

"You just can't understand **worry** until you have a child of your own."

Welcome to cold and flu season. Now that flu and many other illnesses are circulating, we want to help you answer these questions: How will I know if my child is too sick? When do I need to worry? When should I call the pediatrician?"

Here is how to approach your own ill child.

First and foremost, **trust your parental instincts** that something is wrong.

Think about these THREE MAIN SYSTEMS: **breathing, thinking, and drinking/peeing**.

Breathing:

Normally, breathing is easy to do. It is so easy, in fact, that if you take off your child's shirt and watch her breathe, it can be hard to see that she is breathing. You should try this while your child is healthy. Normal breathing does not involve effort. It does not involve the chest muscles.

If your child has pneumonia, bad asthma, bronchitis, or any other condition that causes respiratory distress, breathing becomes hard. It becomes faster. It involves chest muscles moving so it looks like ribs are sticking out with every breath: click on the photo in this article to see this. The chest itself moves a lot. Kids' bellies may also move in and out. Nostrils flare in attempt to get more oxygen. Sometimes kids make a grunting sound at the end of each breath because they are having difficulty pushing the air out of their lungs before taking another breath in. Also, instead of a normal pink color, your child's lips can have a blue or pale color. Pink is good, blue or pale is bad. Children old enough to talk may actually have difficulty talking because they are short of breath. Any of the above signs tell you that your child needs medical attention.

Thinking:

This refers to mental or emotional state. Normally, children recognize their parents and are comforted by their presence. They are easy to console by being held, rocked, massaged, etc. They know where they are, and they make sense when they talk.

Change in mental state, whether it comes from lack of oxygen/shortness of breath, pain, or severe infection, results in a child who is inconsolable. She may not recognize her parents or know where she is. Instead of

calming, she may scream louder when rocked. She may seem disoriented or just too lethargic/difficult to arouse. Being very combative can also be a sign of not getting enough oxygen. In a baby, extreme pain can cause all these signs as well.

Drinking/peeing:

While this varies somewhat depending on the age of the child, most kids urinate every 3-6 hours or so. Young babies may urinate more frequently than this and some older kids urinate perhaps 3 times daily. You should know your child's baseline. Normal urine reflects a normal state of hydration. If you don't drink enough, you will urinate less.

If your child has fever, coughing, vomiting, or diarrhea, she will use up fluid in her body faster than her baseline. In order to compensate, she needs to drink more than her baseline amount of liquid to urinate normally. A child will refuse to drink because of severe pain, shortness of breath, or change in mental state, and may go for hours without urinating. This is a problem that needs medical attention. Occasionally a child will urinate much more than usual and this can also be a problem (this can be a sign of new diabetes as well as other problems). Basically any change from baseline urine output is a problem.

A note about fever:

Any infant 8 weeks of age or younger with fever of 100.4 F or higher, measured rectally, requires immediate medical attention, even if all other systems are good. Babies this young can have fever before any other signs of serious illness such as meningitis, pneumonia, blood infections, etc. and they can fool us by initially appearing well.

In older babies and children, we take note of fevers of 101F

or higher. Some kids can look quite well even at 104F and others can look quite ill at 101F. Fever is a sign that your body's immune system is working to fight off illness. In addition to fever, it is important to look at breathing, thinking, and hydration because this will help you determine how quickly your child needs medical attention. A child with a mild runny nose and fever of 103 who can play still play a game with you while drinking her apple juice is less ill than a child with a 101 fever who doesn't recognize her parents. Read more about fever here.

To summarize, **any deviation from normal breathing, thinking, or drinking/urinating (peeing) is a problem** that needs medical attention, even if no fever is present. In addition, any illness that **gets worse instead of getting better** is a problem that needs medical attention. Also, remember to let your child's doctor know if your child is missing any vaccines.

Finally, all parents have PARENTAL INSTINCT. Trust yourself. Ultimately, if you are wondering if you should seek medical advice, just do it. If parents could worry every problem away, no one would ever be sick.

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Fever in kids: What's hot and what's not

Parents ask us about fever more than any other topic, so here is what every parent needs to know:

Fever is a sign of illness. Your body makes a fever in effort to heat up and kill germs without harming your body.

Here is what fever is NOT:

· Fever is NOT an illness or disease.
· Fever does NOT cause brain damage.
· Fever does NOT cause your blood to boil.
· Unlike in the movies and popular media, fever is NOT a cause for hysteria or ice baths.
· Fever is NOT a sign of teething.

Here is what fever IS:

· In many medical books, fever is a body temperature equal to or higher than 100.4 degrees Farenheit.
· Many pediatricians, consider 101 degrees Farenheit or higher as the definition of fever once your child is over 2 months of age.
· Fever is a great defense against disease, and thus is a SIGN, or symptom, of an illness.

To understand fever, you need to understand how the immune system works.

Your body encounters a germ, usually in the form of a virus or bacteria, that it perceives to be harmful. Your brain sends a message to your body to HEAT UP, that is, make a fever, to kill the germs. Your body will never let the fever get high enough to harm itself or to cause brain damage. Only if your child is experiencing Heat Stroke (locked in a hot car in July, for example), or if your child already a specific kind of brain damage or nervous system damage (rare) can your child get hot enough to cause death.

When your body has succeeded in fighting the germ, the fever will go away. A fever reducing agent such as acetaminophen (e.g. Tylenol) or ibuprofen (e.g. Motrin) will decrease temperature temporarily but fever WILL COME BACK if your body

still needs to kill off more germs.

Symptoms of fever include: feeling very cold, feeling very hot, suffering from muscle aches, headaches, and/or shaking/shivering. Fever often suppresses appetite, but thirst should remain intact: drinking is very important with a fever.

Fever may be a sign of any illness. Your child may develop fever with cold viruses, the flu, stomach viruses, pneumonia, sinusitis, meningitis, appendicitis, measles, and countless other illnesses. The trick is knowing how to tell if your child is VERY ill or just having a simple illness with fever.

Here is how to tell if your child is VERY ill with fever vs not very ill:

Any temperature in your infant younger than 8 weeks old that is 100.4 (rectal temp) degrees or higher is a fever that needs immediate attention by a health care provider, even if your infant appears relatively well. For kids over 2 months of age, take the temperature anyway you'd like, just let your pediatricians know how you took it.

Any fever that is accompanied by moderate or severe pain, change in mental state (thinking), dehydration (not drinking enough, not urinating because of not drinking enough), increased work of breathing/shortness of breath, or new rash is a fever that NEEDS TO BE EVALUATED by your child's doctor. In addition, a fever that lasts more than three to five days in a row, even if your child appears well, should prompt you to call your child's health care provider. Recurring fevers should also be evaluated.

Should you treat fever? As we explained, fever is an important part of fighting germs. Therefore, we do NOT advocate treating fever UNLESS the side effects of the fever are causing harm. Reduce fever if it prevents your child from drinking or sleeping, or if body aches or headaches from fever are causing discomfort. If your child is drinking well, resting

comfortably or playing, or sleeping soundly, then he is handling his fever just fine and does not need a fever reducing agent just for the sake of lowering the fever.

A note about febrile seizures (seizures with fever): Some unlucky children are prone to seizures with sudden temperature fluctuations. These are called febrile seizures. This tendency often runs in families and usually occurs between the ages of 6 months to 6 years. Febrile seizures last fewer than two minutes. They usually occur with the first temperature spike of an illness (before parents even realize a fever is present) and while scary to witness, do not cause brain damage. No study has shown that giving preventative fever reducer medicine decreases the risk of having a febrile seizure. As with any first time seizure, your child should be examined by a health care provider, even if you think your child had a simple febrile seizure.

Please see our “How sick is sick?” blog post for further information about how to tell when to call your child’s health care provider for illness.

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