

Pinnacle Pediatrics
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Pinnacle Pediatrics Newsletter
Volume XIII, #1

Happy New Year (a little late, I know). By now I am sure you are all settled into your post-Holiday routines. Unfortunately, we are settled into our usual winter-illness routines as well. So far, the Influenza season has been mild, but we are seeing plenty of colds, coughs and G.I. illness. This, of course, is typical for this time of year, due both to the preponderance of viruses with an affinity for cold weather, and the increased transmissibility of these viruses due to the indoor crowding of the “huddled masses” during the winter months.

The good news is that almost all of these infections are caused by viruses, which means they will resolve on their own without any pharmacologic intervention. The bad news is, there is no effective treatment for most of these illnesses, so we simply try to keep the ill children comfortable while their own immune system defeats these viruses.

This is our annual “What to do when your child is sick” issue. I encourage you to read it thoroughly, both as a refresher on these common topics, and because there is important new advice based on recent studies (as well as a new approach to sore throats). I also encourage you to keep this issue handy so that you can refer to it when your child is ill. I will also add this to my website, pinnaclepediatrics.com under Newsletters, so that you can refer to it there as well.

A quick note on “telemedicine” before we proceed. Telemedicine is a trendy topic in medicine currently, referring to the ability to diagnose and treat patients remotely, without the physician being in immediate proximity to the patient. In reality, Pediatricians have been doing this for a long time. Multiple technological enhancements have made this an even better option today.

At Pinnacle Pediatrics, because of my intimate knowledge of my patients and their home environment, as well as our routine electronic communication, I am able to deliver a great deal of illness care via telemedicine. Realistically, most Pediatric illnesses are diagnosed by history rather than physical examination, such as colds, Influenza, gastroenteritis, sinus infections, even many cases of ear infections and sore throat. In addition, thanks to the relative ease of transmitting photographs, many skin diseases such as Impetigo, eczema, ringworm and paronychia are also easily handled remotely.

Many injuries are also diagnosed chiefly by history, not physical exam (such as minor head injuries), so they can also be handled by telemedicine. Rest assured that Pinnacle Pediatrics will continue to be at the forefront of telemedicine care. I will continue to strive to provide the highest quality, most convenient Pediatric health care available anywhere.

Hopefully, all of your children will be illness-free this year. (Hopefully, they will also keep their rooms tidy, get their faces out of their phone screens and be nice to their siblings. Good luck with that.) However, if they do become ill, read on...

Fever

Almost all of you have heard me preach that fever is not dangerous, it is simply a sign of infection. My concern is not the fever, but what is causing the fever - what is the infection and, even more important, how serious does it appear to be. Any time a child has a fever, or any symptom of illness, the most important questions to ask are..."How is the child acting?" and "How is the child drinking?" If these two items seem to be okay, then it is very unlikely that there is a serious problem. Conversely, if the child is extremely irritable or lethargic, or refusing to drink for an extended period, then we need to be concerned.

Any time a child has a fever or is ill, she is entitled to act "sick", just not "real sick". She may be fussy, sleepy, not eat well. But, she needs to drink, she needs to be arousable, consolable, and interactive to reassure us that there is nothing serious going on, that she is not "toxic".

Once it has been established that the child is not toxic, then look for other "clues" as to the source of the fever, i.e. cold symptoms (runny nose, cough, congestion, sneezing), gastrointestinal symptoms (abdominal pain, vomiting, diarrhea), sore throat, earache, etc. Often in children, there are no symptoms other than fever. Most of the time, these kids have a viral illness, which may simply run its course (usually 3-5 days) without any other symptoms.

Fever itself is not dangerous unless it reaches 107°F or higher, which is rarely seen except in severe heat stroke -- almost never with an infection. It is true that about 10% of children under 7 years of age will have a seizure with fever. But this is related to the rate of rise of the fever not how high it is. Most of the time the parent doesn't even know their child has a fever before the seizure. Fortunately, although febrile seizures are frightening to the parent, they are rarely serious. It has never been demonstrated that we can prevent febrile seizures by aggressively treating the fever.

The key is not to focus on the fever. It is worthwhile to measure the temperature one time to document that there is a true fever. (Often kids feel warm to a parent's touch, but the temperature is normal. This is not a concern. There is no disease state associated with this). After that, put the thermometer away - it is not important whether the temp. is 101 or 104. The degree of the fever correlates poorly with the severity of the infection. If the child is uncomfortable with the fever (usually the case), feel free to treat the child with an antipyretic (fever reducer). Reducing the fever will not "mask" a serious illness, and if the fever is reduced, the child will likely drink better and act better, thus reassuring us that he is not "toxic". Do not be concerned, however, if the medicine does not decrease the fever - it has been clearly shown that the response to antipyretics is not indicative of the severity of the illness. Acetaminophen (Tylenol) or Ibuprofen (Motrin, Advil) are both effective at the proper dose (15mg./kg. every four hours for Acetaminophen, 10mg./kg. every six hours for Ibuprofen). Head-to-head, Ibuprofen appears to be slightly more effective than Acetaminophen. Although you will hear medical personnel recommending alternating the two medicines, I do not believe that this is a good idea. It is hard to coordinate an every four hour and an every six hour dosing, and many mistakes, leading to overdoses, have been made in this manner. Stick with one antipyretic and use it appropriately. Besides, the main point here is that Fever is Not the Enemy. We treat it to make the child comfortable, but the real concerns are as we discussed

above. (Note -- Many cold medicines contain Acetaminophen, so combining Acetaminophen with a cold product can lead to an overdose of Acetaminophen. Always read labels to avoid this serious complication). (Also note -- Acetaminophen is the most common accidental medication poisoning in the U.S. This can lead to serious, even fatal, liver injury. Keep Acetaminophen, like all medicines, safely away from small children).

This discussion does not apply to the infant under three months of age. Although fever is not dangerous for this child either, a child under three months of age with a true fever (temp. greater than 100.5°F.) has a 20% chance of having a serious infection, and thus necessitates a call to the Pediatrician. Likewise, if a child greater than three months of age appears toxic, or the fever lasts more than 3-5 days, the Pediatrician should be called.

Colds

Colds are ubiquitous - everybody gets them. Because there are numerous viruses that cause colds, a child can get many colds in the same season. The usual symptoms are low-grade fever (99°-102°F.) for the first few days, sore throat, runny nose, sneezing, congestion, and cough. The runny nose usually starts out clear, then turns cloudy around day 4, then turns clear again around day 7. A cold may make a child slightly uncomfortable, slightly lethargic and cause a decrease in appetite. But, most kids will still be fairly active and still drink well. On average children get 6-12 colds per year. Parents often become concerned that their child is getting too many colds, and question if they have a problem with their immune system. Children who have true immune deficiencies are prone to recurrent serious infections, not colds.

Cough is the single most common reason for a call to the Pediatrician. It makes the child uncomfortable, and drives parents crazy. Parents often focus on the nature of the cough (dry, wet, harsh, phlegmy, etc.), but this is usually insignificant in determining the severity of the child's illness. The only accompanying symptom that should cause concern is difficulty breathing, particularly when the child is not in the middle of a coughing spell. If the child is breathing fast or hard for a prolonged period, the Pediatrician should be notified.

Cough often persists for 4-8 weeks, which drives parents crazy. This is due to inflammation of the airway, not the infection that initiated it, so these children are not contagious.

As I have discussed in prior newsletters, cold and cough medicines are largely ineffective. Due to possible side-effects, they are no longer recommended in children under 6 years of age. Therapies that may make your child a little more comfortable include moisture in the air (vaporizer/humidifier, bathroom steam) and sipping beverages/sucking on lozenges (bathing the cough receptors in the back of the throat helps to decrease cough). Honey (for the child over 1 year of age) has also been shown to be mildly beneficial for cough. Salt-water (saline) nose drops with suction can help to ease congestion in the infant. You can make saline nose drops by mixing ¼ teaspoon of salt in 4 ounces of water. Heat it so it goes into solution, then let it cool -- Voila, saline nose drops. Vicks under the nose may offer relief from congestion, though it has no apparent benefit when rubbed on the chest.

In the child above 6 years of age, cough/cold medicines are still of questionable benefit, but have decreased risk. Pseudoephedrine is the most effective oral decongestant, but is now stored only behind the pharmacist's counter because of its role as an ingredient in the production of crystal meth, so you need to ask for it. Potential adverse effects include insomnia, headache, excitability, nervousness, decreased appetite, increased heart rate and blood pressure, arrhythmias, nausea and vomiting. Phenylephrine has replaced Pseudoephedrine in most OTC cold medicines. Numerous studies show it to be no more effective than placebo (The Medical Letter, Dec. 2015). Afrin nasal spray is effective in relieving congestion, but even when limited to 2-3 days, usage may still result in a "rebound" of nasal congestion. Dextromethorphan is the most common OTC cough suppressant, but it is not very effective. Delsym is a long acting form of Dextromethorphan that may be useful for night time cough. For severe cough in the older child, we may prescribe Codeine if they are unable to sleep at night, though this does risk respiratory depression. Antibiotics have no role in treating the common cold, which is due to a virus, as they only treat bacterial infections. Echinacea, Vitamin C and Zinc have all been purported to help alleviate cold symptoms, but there is no good scientific evidence that this is true in children. Grandma's chicken soup (and actually, just Grandma) may provide the most comfort. "A cold will last seven days if you treat, one week if you don't."

Frequently, a parent becomes concerned that their child's upper respiratory infection is a bacterial infection. This is usually due to a change to cloudy nasal discharge (though, as discussed, this is the norm around day 4) or the length of the symptoms. Most colds do last 7-10 days, and 2 weeks is not unusual. Cough may last 4-6 weeks, which is a frequent cause of concern. The typical bacterial upper respiratory infection (sinus infection) usually presents at the tail end of a cold. Symptoms include high fever, marked congestion, a large amount of thick yellow or green nasal discharge, and a significant worsening of the child's activity level and appetite. These symptoms should prompt a call to the Pediatrician, as sinus infections are amenable to antibiotic therapy.

FLU

Influenza, or the Flu, is a dramatically over-diagnosed disease. Most people who think they have the Flu, don't. The Flu usually presents similarly to a cold, with upper respiratory symptoms (though usually with fewer nasal symptoms), but with the added symptoms of high fever, muscle aches and chills. The Flu may also cause some mild G.I. symptoms (vomiting and diarrhea) but not to the extent of a true G.I. virus. The symptoms of the Flu usually last for 7 days. The Flu almost always presents in epidemic fashion in the winter, not episodically throughout the year.

Influenza is a viral infection, so antibiotics are not useful. There are anti-viral drugs which treat Influenza. However, the older drugs, Amantadine and Rimantadine, are no longer very effective, and the newer drugs, primarily Tamiflu and Relenza, are not extremely effective and appear to be causing an increased number of significant side-effects. Thus, we usually do not treat Influenza except in patients requiring hospitalization, but merely offer supportive therapy, i.e. fluids and antipyretics. Consequently, we usually do not test for Influenza, since the result will not change our management. Tamiflu is being heavily advertised by the manufacturer this

year, but even their ads admit that use of Tamiflu decreases the duration of the illness by only one day.

So far, the 2016/2017 Flu season has been extremely mild in our area (like the weather). Unfortunately, we will likely see many more cases in January and February, as usual. New York and New Jersey have seen a recent spike in the number of Flu cases, so we are probably next. Hopefully this year's Flu vaccine will prove to be more effective than last year's which was only about 67% effective. (Also hopefully we will have the Flu-mist nasal spray available to administer next year, so I'll be a little more popular with your kids).

SORE THROAT

In general, a sore throat (pharyngitis/tonsillitis) is due to either a virus or a bacteria. The usual bacteria that causes a sore throat is Streptococcus, or "strep". Viruses are responsible for 90% of sore throats, although in "strep season", March and April, strep may cause 50% of sore throats.

Often, a cold may start out as just a sore throat, and then on day 2 or 3 the child will develop a full-blown cold. Strep throat usually presents with a high fever, severe sore throat, bright red tonsils (often with pus) and large, swollen lymph nodes in the neck. It is often associated with a headache, abdominal pain and vomiting. Occasionally, strep throat will also be accompanied by a fine, pimply, "sand-paper-like" rash - this is called "Scarlet Fever". Although many years ago this was a more serious form of strep, today it does not represent a more severe illness.

Studies done over 40 years ago demonstrated that it was difficult to distinguish between viral pharyngitis and strep throat. Consequently, physicians have relied on throat cultures and rapid strep tests to make the correct diagnosis. However, these tests are very uncomfortable for most children, and their consequent lack of cooperation often results in an unsatisfactory throat swab, yielding an invalid test. In addition, 5% of the population will have a positive strep test, despite not having an active infection. I am now convinced with 30+ years of clinical experience, that basing treatment on my clinical judgement may be a better option than doing a throat swab. Although I will continue to do rapid strep tests under certain circumstances, I will be doing fewer of them going forward and basing treatment decisions on clinical criteria. (I hear the cheers from the extreme gaggers).

So, if your child has the symptoms of strep that I described, I will likely treat with antibiotics. However, if he/she has only had a sore throat for 1-2 days (which is likely the prelude to a cold), or if your child has other viral symptoms (runny nose, congestion, sneezing, cough), this is likely a viral pharyngitis, and does not require antibiotic treatment.

There is no rush to treat a child with strep throat. Antibiotics initiated within 18 days of the onset of infection will prevent Rheumatic Fever, our chief concern with strep (although only 0.1% of cases of Strep throat result in Rheumatic Fever).

There is no treatment for a viral pharyngitis, just supportive measures such as pain relievers, Chloraseptic spray/lozenges (this contains Benzocaine, a local numbing agent – o.k. for kids over 6 years old) and fluids. Most viral sore throats last 3-5 days, though some, particularly those caused by Coxsackie virus (Hand-Foot-Mouth disease) last for 7 days.

PINK EYE

Pink eye, or conjunctivitis, is an infection of the conjunctival lining of the eye. This can be due to a virus or a bacteria. The primary way to assess the etiology (without doing a culture) is based on the amount of discharge from the eye. A viral conjunctivitis causes erythema (redness) of the inner lower eyelid and the sclera (the white part of the eyeball), but only causes minimal discharge (greater on awaking, then 3-4 times during the day). A bacterial conjunctivitis also causes erythema, but produces a large amount of discharge that accumulates constantly throughout the day.

The treatment for a viral conjunctivitis is simply warm compresses. The duration of symptoms is usually 7 days. Warm compresses are also beneficial for a bacterial conjunctivitis, especially first thing in the morning when the child's eyes are glued shut (which can be very frightening to a young child). Just let the warm washcloth soak on the eyelids for 5 minutes and the eyes will gradually open. In addition, we treat bacterial conjunctivitis with topical antibiotic drops, which will hasten the resolution of the infection (assuming you have six burly Bouncers to hold the child down while you administer the drops).

Pink eye is very contagious, which is why schools and day-cares often exclude children with pink eye. However, it is not serious or dangerous, and only mildly uncomfortable. Often, a facility will advise a parent that their child cannot come back until they are being treated, not realizing that there is no treatment for most of these kids. Many times, I have argued with school nurses and administrators concerning this issue, usually successfully. I do not believe children should be excluded due to a "cold in the eye", any more than they should be excluded due to a cold. This is also the official position of the American Academy of Pediatrics. The key to preventing transmission, as with so many illnesses, is washing the hands, either with soap and water or hand sanitizers, and avoiding touching other children's eyes.

GASTROENTERITIS

This is the final common illness that I will discuss. Typically, this starts with vomiting, which, fortunately, usually lasts less than 24 hours. The advice is to wait 2 hours from the last time the child vomited, and then begin sips of clear liquids (Pedialyte in the infant, any clear liquid in the older child) every 15 minutes. This is very labor intensive, as we wish to get a lot of fluid into the child, but only a little at a time. If the child vomits again, wait another 2 hours, and then start over. Gradually increase the volume as tolerated. If the child has a fever, feel free to treat this to make him/her comfortable.

Many children will also get diarrhea, usually on day 2 of the illness (some may only get diarrhea). The fluid treatment for this is the opposite of vomiting - large amounts infrequently. With diarrhea, every time the gut is challenged with something to digest, large or small, a bowel movement results. So, we try to rest the gut for hours at a time, but then challenge it with a large volume of fluid. No medications are recommended for acute diarrhea, as slowing down the intestinal motility may actually make the child sicker. We do use anti-motility agents in chronic diarrhea, but that is a different entity.

The chief goal with gastroenteritis is to prevent dehydration. The signs of dehydration are: dry lips/mucous membranes, lack of production of tears with crying, lack of urination for an extended period of time, and extreme lethargy. The risk of dehydration depends on the age of the child and the severity of the vomiting and/or diarrhea, with younger children being more susceptible. This is particularly true if the child is refusing to drink. Obviously, if the child appears to be dehydrated, the Pediatrician should be notified. If the child has persistent vomiting or appears to be getting significantly dehydrated, he/she may require intravenous fluids. A recent change in the treatment of these children is administration of a potent anti-emetic, Ondansetron (Zofran). This has prevented many children from requiring intravenous fluids, but is used only in severe cases, due to potential side-effects.

Like most illnesses in children, gastroenteritis is usually viral, so antibiotics are not indicated. In fact, treating a viral gastroenteritis with an antibiotic can result in a very serious illness known as Hemolytic-Uremic Syndrome. If the diarrhea is bloody, this can indicate a bacterial etiology, and a stool culture should be considered.

I hope this discussion proves to be useful to you (actually, I hope it doesn't, meaning your children don't get sick this year - it does happen). Remember, there are links to some excellent medical websites on my website, pinnaclepediatrics.com, as well. If all else fails, don't forget the chicken soup...

Wishing you all a happy, healthy New Year.

Best Regards,

Scott Serbin, M.D.

P.S. – Of course, we all know that laughter is the best medicine. Hopefully, this month's Back Page, featuring amusing signs, will help you stay healthy (or at least make your illness more fun).

Sign over a Gynecologists Office:

“Dr. Jones, at your cervix.”

In a Podiatrist’s Office:

“Time wounds all heels.”

On a Septic Tank Truck:

Yesterday’s Meals on Wheels

At an Optometrist’s Office:

“If you don’t see what you’re looking for,
You’ve come to the right place.”

On A Plumber’s truck:

“We repair what your husband fixed.”

On another Plumber’s truck:

“Don’t sleep with a drip. Call your plumber.”

At a Tire Shop in Milwaukee:

“Invite us to your next blowout.”

On an Electrician’s truck:

“Let us remove your shorts.”

In a Non-smoking Area:

“If we see smoke, we will assume you are on fire
and will take appropriate action.”

On a Maternity Room door:

“Push. Push. Push.”

At a Car Dealership:

“The best way to get back to your feet – miss a car
payment.”

Outside a Muffler Shop:

“No appointment necessary. We hear you coming.”

In a Veterinarian’s waiting room:

“Be back in 5 minutes. Sit! Stay!”

At the Electric Company:

"We would be delighted if you send in your payment on time.
However, if you don't, YOU will be de-lighted."

In a Restaurant window:

"Don't stand there and be hungry come on in and get fed up."

In the front yard of a Funeral Home:

"Drive carefully. We'll wait."

At a Propane Filling Station:

"Thank Heaven for little grills."

In a Chicago Radiator Shop:

"Best place in town to take a leak."

And the best one for last...**Sign on the back of another Septic Tank Truck:**

"Caution – This Truck is full of Political Promises."