

FEVER IN CHILDREN

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98.6°F - 99°F - 100°F - 101°F
102°F - 103°F - 104°F - 105°F

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ACETAMINOPHEN DOSAGE CHART

AGE GROUP	0-3 Months	4-11 Months	12-23 Months	2-3 Years	4-5 Years	6-8 Years	9-10 Years	11-12 Years	12-14 Years								
WEIGHT (pounds)	6-11	12-17	18-23	24-35	36-47	48-59	60-71	72-95	Over 95								
WEIGHT (kilograms)	3-5	5 ½-7	8-10	11-16	17-21	22-26	27-32	33-43	Over 44								
Dose of acetaminophen	40 mg	80 mg	120 mg	160 mg	240 mg	320 mg	400 mg	480 mg	640 mg								
Acetaminophen Drops 80 mg / 0.8 ml	1/2 dropper (0.4 ml)	1 dropper (0.8 ml)	1 1/2 droppers (1.2 ml)	2 droppers (1.6 ml)	3 droppers (2.4 ml)	4 droppers (3.2 ml)	5 droppers (4.0 ml)	6 droppers (4.8 ml)	8 droppers (6.4 ml)								
Acetaminophen Elixir or Suspension 160 mg / 5 ml	[Redacted]								4 teaspoons (20 ml)								
Acetaminophen Children's Chewable Tablets 80 mg each									8 tablets								
Acetaminophen Junior Strength Tablets or Caplets 160 mg each									4 tablets								
Acetaminophen Regular Strength Tablets 325 mg each									2 tablets								
Acetaminophen Suppositories 80 mg each																	
Acetaminophen Suppositories 120 mg each																	
Acetaminophen Suppositories 325 mg each										1/2 supp		1 supp			2 supp		
MAXIMUM TOTAL DOSAGE PER DAY 50-75 mg / kg									150 mg to 275 mg	300 mg to 425 mg	450 mg to 575 mg	600 mg to 875 mg	900 mg to 1175 mg	1200 mg to 1475 mg	1500 mg to 1775 mg	1800 mg to 2375 mg	2400 mg to 3200 mg

Keep all medications out of the reach of children.

Do not use "adult" acetaminophen products in children under 12 years of age.

The dose is given **every 4 hours** with a maximum of 5 doses in 24 hours.

Recommended dose of 4.54 to 6.8 mg/pound (10 to 15 mg/kg) every 4 hours

Maximum dose is 22.7 TO 34 mg/pound/day (50 to 75 mg/kg/day). Maximum one time dose is 600 mg.

If possible, use weight to find the correct dose.

A health care professional should be consulted for dosing for children under the age of two years.

Do not use more than 3 days unless directed by a physician. Do not exceed recommended dose.

Taking more than the recommended dose may not provide more fever relief and could cause serious health problems.

NOTE: "teaspoon" is used as a reference in this chart. It DOES NOT refer to a common kitchen teaspoon.

This booklet is for information only and should never take the place of your physician's advice. Although focused on children, adults should also benefit from much of this information. This information applies to fever in general and may not apply to specific individual persons with fever.

INTRODUCTION

Fever! It happens every day. Fever is the most common complaint of children seen in the emergency department. Parents discover their child has a fever. The doctor's office is closed. They are worried and wonder what should be done next. They've heard the stories of seizures, meningitis, brain injury, and death. Then it's off to the emergency department to see a doctor that they have never seen before and who is not familiar with the child. Once the child is in the emergency room, the doctor must consider multiple options. Is the fever due to a mild or serious illness? From where is the fever coming? Are tests needed? Are antibiotics needed? Should the child be managed at home or in the hospital? What should the management plan include? While this article cannot take the place of your doctor, it can reduce your fears and help you to understand fever and its initial treatment. Armed with these facts, the next time your child has a fever, you may not need to rush off to the emergency department and you will have a better idea of when to call or visit your doctor. Understanding the significance of fever will help in the treatment of fever. There is an enormous amount of misunderstanding and confusion regarding the meaning and treatment of fever. Fever is among the major reasons that children are brought to the physician. Approximately 10% of visits to the physician's office are children up to 36 months of age with fever. Usually, fever is present in a minor illness and is not dangerous nor is it an emergency. The most common cause of fever in children is a viral upper respiratory infection for which antibiotics are not required. However, fever can indicate a serious problem that requires emergency attention. Fever in a child less than 3 months old should be reported to the doctor. General guidelines for fever in children are helpful, but such guidelines cannot be relied upon for specific instances of fever because the guidelines have limitations.

HOW A FEVER IS PRODUCED

Fever production begins when macrophages (immune system cells in the body) are activated by an infection or inflammation. These macrophages attack infections or inflammation and release pyrogens (interleukin-1, tumor necrosis factor, and interferon) into the bloodstream. This release causes the temperature regulatory area in the brain (the anterior hypothalamus) to allow the temperature to rise. This temperature regulatory area in infants and young children may not be well developed and can therefore result in wide variations in the temperature. (See chart on page 16).

TEMPERATURE

Temperature in children is normally higher than in adults. Infants not only produce more heat per body weight than adults, but their temperature may also be increased due to crying, agitation, activity, or by the amount of and type of clothing they are wearing. Adult women's temperature also varies cyclically and therefore does not have a defined dependable normal range. The normal temperature definitions are used when assessing women, but women's cyclically variations should also be considered. As seen below, the normal temperature can vary by as much as 3⁰F. Rectal temperatures are usually 1⁰F (0.6⁰C) higher than oral temperatures.

NORMAL TEMPERATURE RANGE

Normal **Rectal** Temperature: **97.0⁰F** (36.1⁰C) to **100.4⁰F** (38.0⁰C)
Normal **Oral** Temperature: **96.8⁰F** (37.0⁰C) to **99.9⁰F** (37.7⁰C) **orally**

<u>AGE</u>	<u>NORMAL TEMP (°F)</u>	<u>NORMAL TEMP (°C)</u>
3 months	99.4	37.4
1 yr	99.7	37.6
3 yr	99.0	37.2
5 yr	98.6	37.0
7 yr	98.2	36.7
9 yr	98.1	36.7
13 yr	97.9	36.6

Fever is an abnormal increase in body temperature over 100.4⁰F (38⁰C) rectally or 99.9⁰F (37.7⁰C) orally. Temperature between 4am and 4pm tends to be lower than between 4pm and 4am. Children tend to have a higher temperature than adults. Larger children have a larger percent body surface area. The temperature can be elevated by elevation of the body. An accurate temperature can be taken at the child's rectum with a rectal thermometer or axillary with an axillary thermometer. If the temperature does not decrease in one hour. If you do not see improvement, doctor, or someone else should be consulted.

It is NOT necessary to lower the body temperature. Fever is probably a sign of infection because the severity of the fever (bacterial or viral) may have a fever may cause some irritating symptoms such as irritability, the temperature should be lowered so that symptoms can be judged more accurately and to help the child feel better. Fever may be the only sign of illness in very young infants. However, something does not always need to be done for a fever. If the child is playing and appears well, the fever does not necessarily need any treatment. A child older than 3 months of age with a mild fever that is happy, playing, and has no other symptoms usually does not need treatment, but should be watched closely for any changes. It is unlikely that a low-grade fever is harmful or that treatment of a low-grade fever with medications to reduce the fever is needed. Remember that all pregnant women with fever, all patients with heart, lung, or brain illnesses with fever, and all children with febrile seizures should be seen and treated by their physician. Fevers above 42⁰C (107.6⁰F) are usually NOT due to infections, but indicates a serious abnormality.

USING A THERMOMETER

Taking a rectal temperature:

This may not be the best method in children with rectal irritation, diarrhea, or stool present in rectum. There are also digital thermometers for measuring rectal temperature.

1. Use only a rectal thermometer (it has the short stubby round tip).
2. Shake the thermometer down to below 97⁰F (36⁰C).
3. Lubricate the silver bulb end of the thermometer with Vaseline, petroleum jelly, or cold water.
4. Hold the child still down on the stomach. It is often helpful to hold the child's stomach down on your lap by applying mild pressure to the child's back.
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childr g oral temperature.

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7. Leave the thermometer in place for 3 minutes.
8. Do not leave the child unattended.
9. Remove the thermometer.
10. Read the thermometer by turning the thermometer's slightly in each direction until you see the silver mercury column.
11. The temperature is the number at the end of the silver column. The lines between the major degree numbers on the thermometer are 0.2⁰F on the Fahrenheit thermometer and 0.1⁰C on the Celsius thermometer.
12. Write the temperature down.
13. When finished, shake the thermometer down below 97⁰F (36⁰C), wash the thermometer with soap and cool water, dip it in alcohol, gently wipe it off, and put it up in a safe place.

Taking a tympanic (ear) temperature:

This may not be the best method in children with small ear canals, children with ear canals occluded by wax, children with ear infections, or children with sinusitis. Follow the directions included with the tympanic temperature-measuring device.

General Instructions:

1. Make sure the lens is clean, dry, undamaged, and free of debris before use.
2. Center the probe tip in the ear and point it toward the eardrum (tympanic membrane)
3. Firmly seal the ear canal opening to eliminate the effect of ambient air.
4. Hold the head if necessary to prevent movement.
5. The temperature can be taken with this device if the child is awake or asleep.
6. If the temperature is unusually low or high:
 - a.) Take the temperature again with the tympanic thermometer.
 - b.) Recheck the temperature with a rectal thermometer
 - c.) Clean the thermometer lens with dry tissue or a swab.
 - d.) Make sure the probe tip is not cracked or chipped.
 - e.) Have the thermometer checked by a trained technician.

NOTE: Proper technique must be used. The sensor must detect heat from the eardrum and not the cooler ear canal. Therefore the probe must be pointed at the eardrum. The ear canal must be straightened. In children under 3 years of age, the ear lobe must be pulled down and back. In children over 3 years of age, the ear lobe must be pulled up and back. The probe is then pointed in the ear to the midpoint between the opposite side's eyebrow and sideburn. The most common reasons for a low tympanic thermometer reading is a dirty lens (the lens can have fingerprints, earwax, or residue on it), followed by improper technique in the use of the thermometer.

TREATMENT

The goal of treating the fever is to reduce the temperature, reduce the risk of a febrile seizure, and to make the child more comfortable. The objective of the doctor in evaluating the child is to find the type of infection or inflammation that is responsible for the fever. Remember this, treating the fever does not treat the illness. Treatment with acetaminophen or ibuprofen, fluids, sponging, etc often will lower the temperature, but often will not bring the temperature back to normal until the illness is gone.

Fluids

Oral cool fluids are very important for children with fever. Fluids help heat loss by evaporation. 25 per cent of heat loss in children occurs by evaporation, so encourage the child to drink useful fluids such as juice, broth, Popsicle, water, sherbet, Jell-O, Pedialyte, Gatorade, or carbonated beverages (e.g. 7-UP). These fluids will help cool the child and replace water lost through the skin from fever. Solid foods are not essential over a few days time but it is important to keep the child well hydrated with fluids.

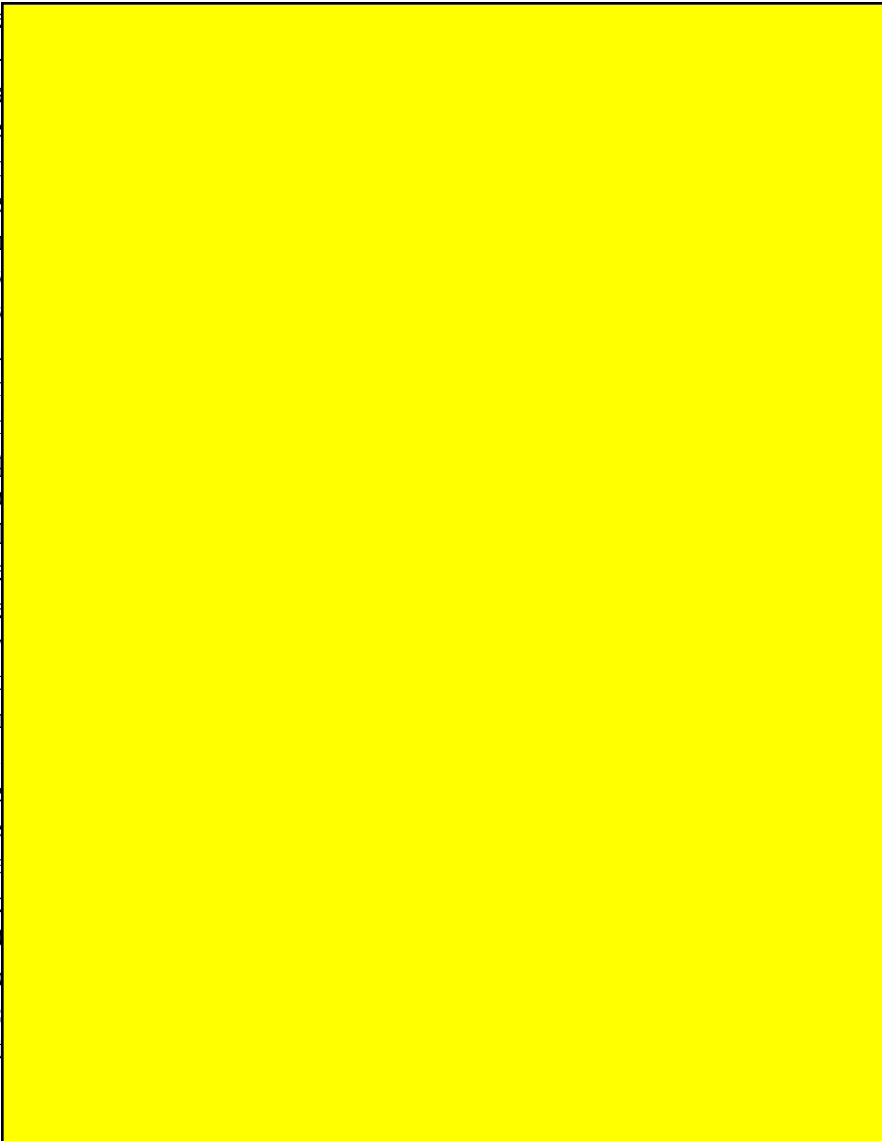
If the child hydration is adequate:

- a) The child's tongue and the inside of the mouth should appear moist.
- b) The child's eyes should not appear sunken.
- c) The child should be urinating as frequently or more than normal (a minimum of three times every 24 hours.
- d) The child should have tears when crying.
- e) An infant should not have a depressed or sunken fontanel (the soft spot on top of the head).

Acetaminophen And/Or Ibuprofen

If the child is less than 3 months of age, do not give acetaminophen or any other medication without your doctor's advice. If the child has a fever, acetaminophen is given every 3-4 hours and not to exceed 4

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acetaminop
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Clothing

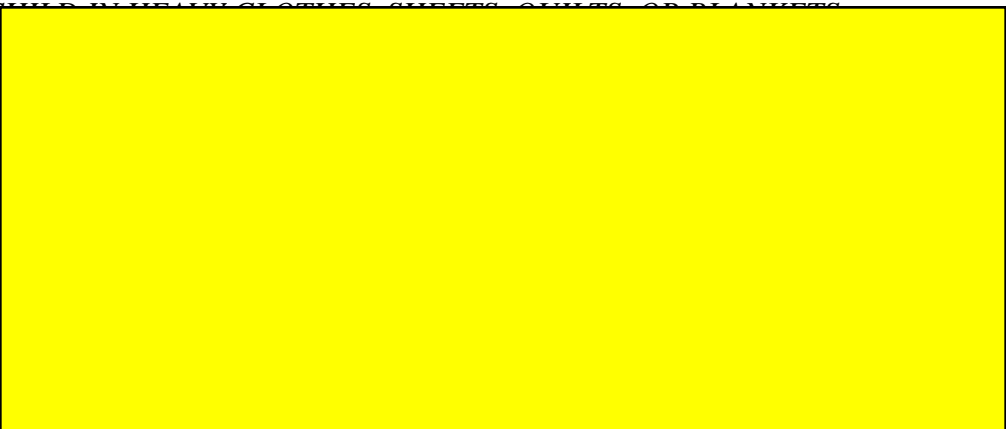
Children lose heat through their skin. Allow the body's heat to escape by dressing the child lightly in thin pajamas, panties, or diapers. It is normal to want to bundle the child, but this will increase the child's temperature. As 60% of heat loss can occur by radiation, removing bundling from the child helps heat loss by radiation and lowers the child's temperature. ***REMEMBER, DO NOT BUNDLE THE CHILD IN HEAVY CLOTHES, SHEETS, COVERS, OR BLANKETS.***

Room Temperature

Keep the room well ventilated. If cooling is needed, small fans may be used to circulate the air, drafts, and cool room temperature down. Do not use fans

The Sponge Bath

Sponging the child plus acetaminophen or ibuprofen is more effective than sponging alone, and is best done when the child is calm. Be careful not to cause shivering, which will cause the temperature to rise! Sponging is used to help lower the temperature when it is over 103⁰F. 25%



of heat loss occurs by evaporation, and sponging the child helps heat loss by evaporation, which reduces the child's temperature.

Use lukewarm plain water (96-100⁰F) to sponge the child. DO NOT use alcohol or add alcohol to the water to sponge the child as this has a risk of intoxication, lowering the blood sugar, or causing coma. DO NOT use ice water or cold-water

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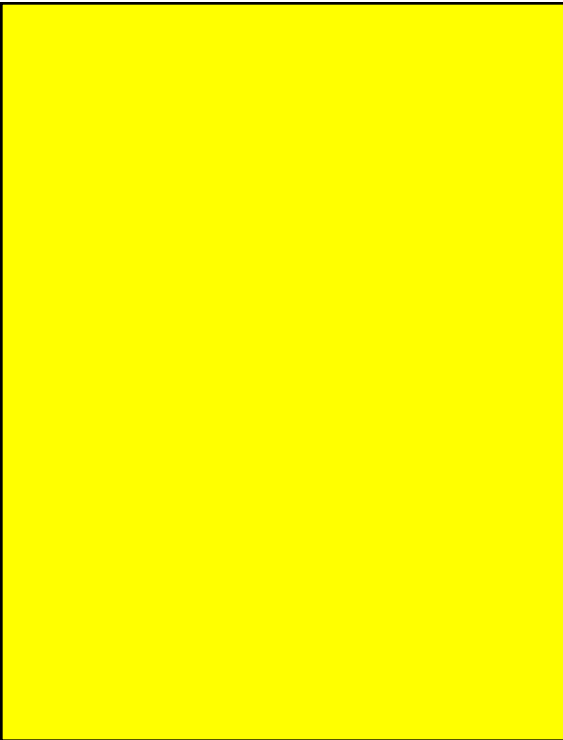
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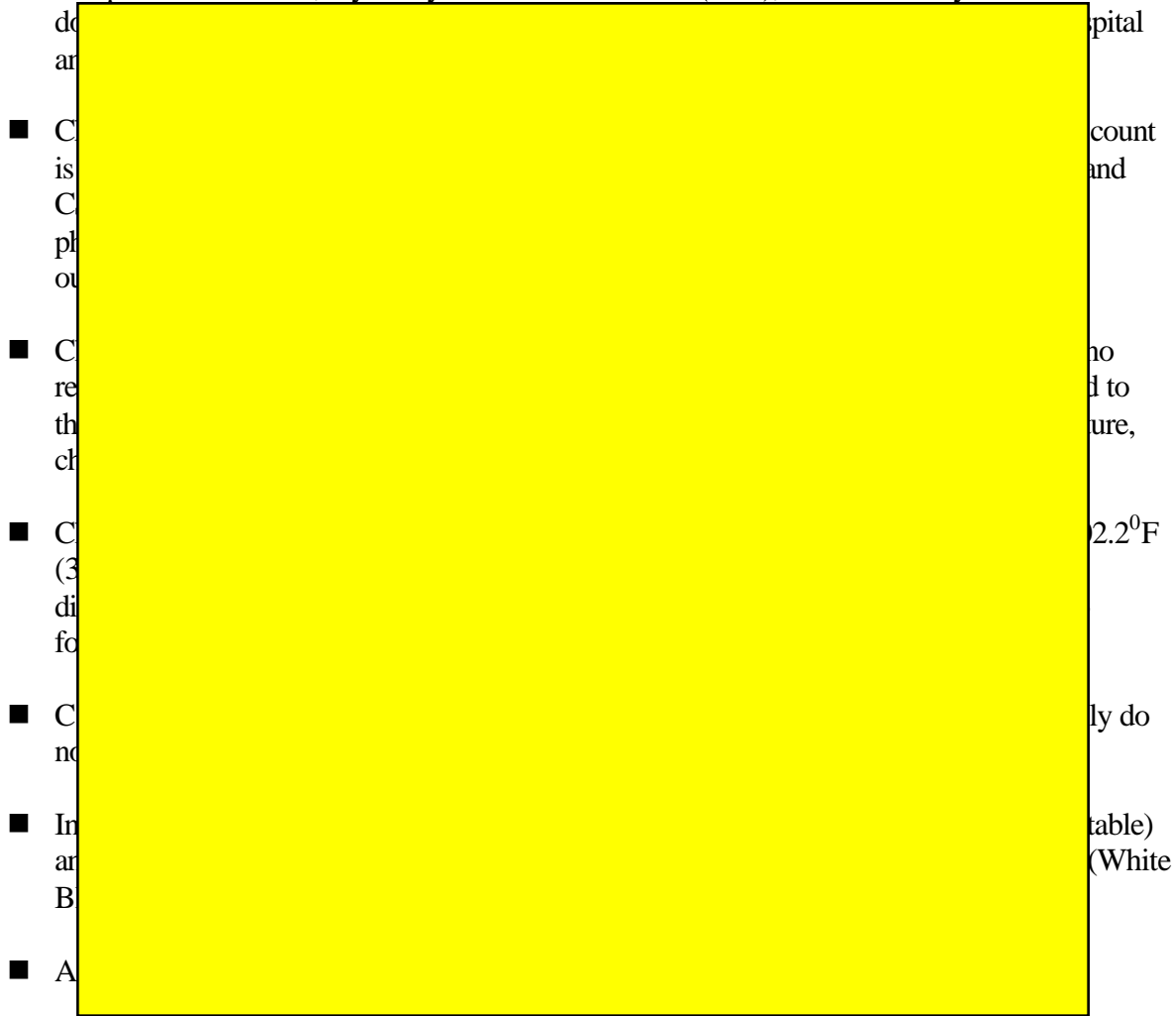
perature is still above 102⁰F,
s than 102⁰F degrees you can
n as directed. The child may

**STOP THE SPONGE BATH JUST
CHILD BEGINS TO SHIVER**

r usually takes at least 30
wn on a towel. Another towel
d. This towel is replaced every 2

SOME OF THE SCIENTIFIC RECOMMENDATIONS

- Some physicians recommend the hospitalization of any child less than 28 days old with a fever while awaiting the results of tests.
- Some physicians hospitalize all infants less than 3 months of age with a fever.
- Children less than 3 months of age with a temperature above 101.3⁰F (38.5⁰C) are at a higher risk of having a serious infection than are older children with the same temperature. They need extensive laboratory tests especially when the history and physical exam do not indicate a diagnosis. They should have cultures of the blood, urine, and CSF (lumbar puncture). A complete blood count, erythrocyte sedimentation rate (ESR), and chest x ray should also be



- Meningitis should be considered in a child with a febrile seizure.
- Some experts recommend that all children age 12 months or less should have a lumbar puncture if they have a febrile seizure.
- Children less than 3 months of age usually do not have a serious illness if all of the following are present: age over 1 month, erythrocyte sedimentation rate is less than 30mm/hr, white blood count is less than 15,000/ mm³, polymorphonuclear count is less than 10,000/ mm³, band cell count is less than 500/ mm³, no leukocytes in stool, and no soft tissue infection is found.

HOW TO USE THE CHILD WITH FEVER CHART

The child with fever chart is very useful for documenting the important symptoms and history of the child's illness. Keeping this record will be very helpful not only to the parent, but also to the physician when or if the child is seen by a physician. First, **Save the original chart**. Make a copy of the original chart and complete the copy when documenting on the child with fever.

- ✎ Fill in the child's name, date of birth, allergies, SS# (social security number), and age.
- ✎ Weigh the child and enter it in the _____ of this weight is in (lb) pounds or (kg) kilograms.
- ✎ Look up the acetaminophen and _____ the child. Enter the dose in "mg" and not as "drops" or "suppositories". _____ this dose, you should then determine the number of tablets _____ type of acetaminophen or ibuprofen that you are using. This could be _____ reminder to you. If possible, use weight to find the recommended _____, the age on the chart can also be used to find the recommended dose.
- ✎ The name of the child's insurance _____, and insurance phone number should also be listed in the appropriate _____.
- ✎ Fill in the names of any medications _____.
- ✎ List the child's past illnesses or surgeries _____.
- ✎ It is important to list the name, address (including area code) of the child's parents, physician, and hospital.
- ✎ Use a separate line for each time _____minophen or ibuprofen.
- ✎ Enter the date and time, the amount _____ given, the child's heart rate, and the child's breathing rate.
- ✎ Check the inside of the child's mouth _____ and "no" if it is dry.
- ✎ If the child (over 6 weeks of age) _____ sent and "no" if there are not any tears.
- ✎ If the child has chills or shivering _____ have chills or shivering, enter "no".
- ✎ The Observation column is used _____ child's symptoms. Enter "A" in the column if the child has *Abdomen Pain*. Enter "C" in the column if the child has *Achiness*. Enter "C" in the column if the child has *Cough*. Enter "D" in the column if the child has *Diarrhea*. Enter "E" in the column if the child has *Ear Pain*. Enter "H" in the column if the child has *No Energy*. Enter "H" in the column if the child has a *Headache*. Enter "I" in the column if the child is *Irritable*. Enter "K" in the column if the child has *No Appetite*. Enter "N" in the column if the child has a *Runny Nose*. Enter "R" in the column if the child has *No urine* output. Enter "S" in the column if the child has a *Skin Rash*. Enter "T" in the column if the child has a *Sore Throat*. Enter "V" in the column if the child is *Vomiting*. Enter "Y" in the column if the child is *Sleepy*. Enter "Z" in the column if the child has a *Problem Sleeping*.

WEIGHT CONVERSIONS

LBS	KGS
5	2.3
6	2.7
7	3.2
8	3.6
9	4.1
10	4.5
11	5.0
12	5.5
13	5.9
14	6.4
15	6.8
16	7.3
17	7.7
18	8.2
19	8.6
20	9.1
21	9.5
22	10.0
23	10.5
24	10.9
25	11.3
26	11.8
27	12.3
28	12.7
29	13.2
30	13.6
31	14.1
32	14.5
33	15.0
34	15.5
35	15.9
36	16.4
37	16.8
38	17.3
39	17.7
40	18.2

LBS	KGS
41	18.6
42	19.1
43	19.5
44	20.0
45	20.5
46	20.9
47	21.4
48	21.8
49	22.3
50	22.7
51	23.2
52	23.6
53	24.1
54	24.5
55	25.0
56	25.5
57	25.9
58	26.4
59	26.8
60	27.3
61	27.7
62	28.2
63	28.6
64	29.1
65	29.5
66	30.0
67	30.5
68	30.9
69	31.4
70	31.8
71	32.3
72	32.7
73	33.2
74	33.6
75	34.1
76	34.5

LBS	KGS
77	35.0
78	35.5
79	35.9
80	36.4
81	36.8
82	37.3
83	37.7
84	38.2
85	38.6
86	39.1
87	39.5
88	40.0
89	40.5
90	40.9
91	41.4
92	41.8
93	42.3
94	42.7
95	43.2
96	43.6
97	44.1
98	44.5
99	45.0
100	45.5
101	45.9
102	46.4
103	46.8
104	47.3
105	47.7
106	48.2
107	48.6
108	49.1
109	49.5
110	50.0

TEMPERATURE CONVERSIONS

Fahrenheit To Celsius Conversion $^{\circ}\text{C} = (^{\circ}\text{F} - 32) \times 5/9$

$^{\circ}\text{F}$ to $^{\circ}\text{C}$: subtract 32 from the Fahrenheit temperature and multiply remainder by 5/9

Celsius To Fahrenheit Conversion $^{\circ}\text{F} = (^{\circ}\text{C} \times 9/5) + 32$

$^{\circ}\text{C}$ to $^{\circ}\text{F}$: multiple the Celsius temperature by 9/5 then add 32

$^{\circ}\text{C}$ to K (Kelvin): add 273

$^{\circ}\text{C} + 273 = \text{K}$

K (Kelvin) to $^{\circ}\text{C}$: subtract 273

$\text{K} - 273 = ^{\circ}\text{C}$

$^{\circ}\text{F}$	$^{\circ}\text{C}$	$^{\circ}\text{F}$	$^{\circ}\text{C}$	$^{\circ}\text{F}$	$^{\circ}\text{C}$	$^{\circ}\text{F}$	$^{\circ}\text{C}$
95.0	35.00	97.5	36.39	100.0	37.78	102.6	39.22
95.1	35.06	97.6	36.44	100.1	37.83	102.7	39.28
95.2	35.11	97.7	36.50	100.2	37.89	102.8	39.33
95.3	35.17	97.8	36.56	100.3	37.94	102.9	39.39
95.4	35.22	97.9	36.61	100.4	38.00	103.0	39.44
95.5	35.28	98.0	36.67	100.5	38.06	103.1	39.50
95.6	35.33	98.1	36.72	100.6	38.11	103.2	39.56
95.7	35.39	98.2	36.78	100.7	38.17	103.3	39.61
95.8	35.44	98.3	36.83	100.8	38.22	103.4	39.67
95.9	35.50	98.4	36.89	100.9	38.28	103.5	39.72
96.0	35.56	98.5	36.94	101.0	38.33	103.6	39.78
96.1	35.61	98.6	37.00	101.1	38.39	103.7	39.83
96.2	35.67	98.7	37.06	101.2	38.44	103.8	39.89
96.3	35.72	98.8	37.11	101.3	38.50	103.9	39.94
96.4	35.78	98.9	37.17	101.4	38.56	104.0	40.00
96.5	35.83	99.0	37.22	101.5	38.61	104.1	40.06
96.6	35.89	99.1	37.28	101.6	38.67	104.2	40.11
96.7	35.94	99.2	37.33	101.7	38.72	104.3	40.17
96.8	36.00	99.3	37.39	101.8	38.78	104.4	40.22
96.9	36.06	99.4	37.44	101.9	38.83	104.5	40.28
97.0	36.11	99.5	37.50	102.0	38.89	104.6	40.33
97.1	36.17	99.6	37.56	102.1	38.94	104.7	40.39
97.2	36.22	99.7	37.61	102.3	39.06	104.8	40.44
97.3	36.28	99.8	37.67	102.4	39.11	104.9	40.50
97.4	36.33	99.9	37.72	102.5	39.17	105.0	40.56

BRANDS OF ACETAMINOPHEN

Acephen Suppositories 120mg, 325mg, 650mg
 Aceta Elixir 120mg/5ml
 Aceta tablets 325mg, 500mg
 Acetaminophen Capsules 500mg
 Acetaminophen chewable tablets 80mg
 Acetaminophen Drops solution 100mg/1ml
 Acetaminophen Elixir 120mg/5ml, 160mg/5ml
 Acetaminophen Liquid 160mg/5ml, 500mg/15ml
 Acetaminophen Supp. 120, 300mg, 325mg, 650mg
 Acetaminophen Tablets 325mg, 500mg, 650mg
 Apacet chewable tablets 80mg
 Apacet solution 100mg/1ml
 Arthritis Foundation Aspirin Free Caplets 500mg
 Aspirin Free Anacin Max. Strength Gelcaps 500mg
 Aspirin Free Anacin Max. Strength Tablets 500mg
 Aspirin Free Pain Relief Caplets 500mg
 Aspirin Free Pain Relief Tablets 325mg, 500mg
 Dapacin capsules 325mg
 Dynafed E.X., Extra Strength tablets 500mg
 Dynafed Jr, Children's chewable tablets 80mg
 Fem-Etts tablets 325mg
 Feverall Children's Capsules 80mg
 Feverall Children's Sprinkle 80mg
 Feverall Children's Suppositories 120mg
 Feverall Infants Suppositories 80mg
 Feverall Junior Strength Capsules 160mg
 Feverall Junior Strength Sprinkle 160mg
 Feverall Junior Strength Suppositories 325mg
 Genapap Children's chewable tablets 80mg
 Genapap Children's Elixir 160mg/5ml
 Genapap Extra Strength Caplets 500mg
 Genapap Extra Strength tablets 500mg
 Genapap Infants' Drops 100mg/1ml
 Genapap Tablets 325mg
 Genebs Extra Strength Caplets 500mg
 Genebs Extra Strength tablets 500mg
 Genebs tablets 325mg
 Halenol Children's Liquid 160mg/5ml

Liquiprin Drops For Children Solution 80mg/1.66ml
 Mapap Children's Elixir 160mg/5ml
 Mapap Extra Strength Tablets 500mg
 Mapap Infant Drops 100mg/1ml
 Mapap Regular Strength Tablets 325mg
 Maranox tablets 325mg
 Meda Cap Capsules 500mg
 Meda Tab Tablets 325mg
 Neopap Suppositories 125mg
 Oraphen-PD Elixir 120mg/5ml
 Panadol Caplets 500mg
 Panadol Children's chewable tablets 80mg
 Panadol Children's Liquid 160mg/5ml
 Panadol Infants' Drops 100mg/1ml
 Panadol Junior Strength Caplets 160mg
 Panadol Tablets 500mg
 Redutemp tablets 500mg
 Ridenol Elixir 80mg/5ml
 Silapap Children's Elixir 80mg/2.5ml
 Silapap Infants solution 100mg/1ml
 Tapanol Extra Strength Caplets 500mg
 Tapanol Extra Strength Gelcaps 500mg
 Tapanol Extra Strength tablets 500mg
 Tapanol Regular Strength tablets 325mg
 Tempra 1 Solution 100mg/1ml
 Tempra 2 syrup Liquid 160mg/5ml
 Tempra 3 Chewable tablets 80mg
 Tempra tablets 160mg
 Tylenol Children's Chewable Tablets 80mg
 Tylenol Children's Elixir 80mg/2.5ml
 Tylenol Children's Suspension 160mg/5ml
 Tylenol Extended Relief Caplets 650mg
 Tylenol Extra Strength Gelcaps 500mg
 Tylenol Extra Strength Geltabs 500mg
 Tylenol Extra Strength Liquid 500mg/15ml
 Tylenol Extra Strength tablets 500mg
 Tylenol Infants' Concentrated Drops 80mg/0.8ml
 (160mg/1.6ml=2 dropperfuls)
 Tylenol Junior Strength Chewable Tablets 160mg

Tylenol Junior Strength tablets 160mg
 Tylenol Regular Strength Caplets 325mg
 Tylenol Regular Strength tablets 325mg
 Uni-Ace solution 100mg/1ml

BRANDS OF IBUPROFEN

Advil Caplets 200mg
 Advil Liqui-Gels Capsules 200mg
 Advil Children's Suspension 100mg/5ml
 Advil Junior Strength Tablets 100mg
 Advil Pediatric Drops 100mg/2.5ml
 Advil Tablets 200mg
 Arthritis Foundation Tablets 200mg
 Bayer Select Pain Relief Formula Caplets 200mg
 Dynafed IB Tablets 200mg
 Genpril Caplets 200mg
 Genpril Tablets 200mg
 Haltran Tablets 200mg
 Ibuprin Tablets 200mg
 Ibuprofen Caplets 200mg
 Ibuprofen Tablets 200mg
 Menadol Tablets 200mg
 Midol IB Tablets 200mg
 Motrin Children's Suspension 100mg/5ml
 Motrin Children's Tablet 50mg
 Motrin Children's Tablets 100mg
 Motrin IB Caplets 200mg
 Motrin IB Gelcaps 200mg
 Motrin IB Tablets 200mg
 Motrin Oral Drops 50mg/1.25ml (dropperful)
 Motrin Tablets 100mg
 Nuprin Caplets 200mg
 Nuprin Tablets 200mg
 PediaCare Fever Drops 50mg/1.25ml (dropperful)
 PediaCare Fever Liquid 100mg/5ml
 Saleto-200 Tablets 200mg

FEVER HIGHLIGHTS

The degree of fever does not necessarily reflect the severity of the illness.

The C.A.L.M. Guidelines

C- Check your child

A- Assess other signs

L- Lower the temperature

M- Monitor your child

The S.A.F.E. Guidelines

S- See the label for

A- Ask a doctor, pharmacist

F- Follow the directions

E- Enter the time

Heat Loss From

(1) Radiation

Removing

(2) Evaporation

Hydrating

(3) Convection

(4) Conduction

Hospital care

Drugs That Can

Antihistamines

Barbiturates (Phenobarbital)

Bleomycin

Carbamazepine (Tegretol)

Cephalosporins

Cimetadine (Tagamet)

Hydralazine (Apresoline)

Ibuprofen (Motrin)

Iodides

Methyldopa (Aldomet)

Nifedipine (Adalat, Procardia)

Nitrofurantoin (Macrochantin)

Phenytoin (Dilantin)

Penicillin

Procainamide (Pronestyl)

Quinidine (Quinaglute, Quinidex)

Rifampin

Salicylates

Streptozocin

Sulfonamides

BACTERIAL AND VIRAL ILLNESSES

- (A) Acetaminophen and/or ibuprofen will not cure a cold or the flu (influenza), but they will lower the temperature and make the child feel better.
- (B) Acetaminophen and/or ibuprofen will lower temperature and make the child feel better after recent immunizations.
- (C) Antibiotics are needed for bacterial infections such as Strep Throat. Acetaminophen and/or ibuprofen will not eliminate the infection.

HOW TO USE SUPPOSITORIES.

- (1) Suppositories are designed to melt inside the rectum of the child. Keep them in a cool place to prevent them from melting. If they feel too soft, place them in the refrigerator for 15 minutes before use.
- (2) If possible, use mild soap and warm water to clean around the rectum. Rinse thoroughly and dry by patting or blotting with toilet paper.
- (3) Remember to remove the wax cap from the suppository.
- (4) Place the child flat on the back. If possible, the child should be placed on one side with the rectum facing up.
- (5) Gently insert the pointed end of the suppository into the child's rectum. Use the fingertip to completely insert the suppository any farther than it will go easily.
- (6) Wash your hands when finished.
- (7) Keep the child lying still for 15 minutes to melt and be absorbed into the child's body.

- ✓ **Do** put the cap back on medication.
- ✓ **Do** check the concentration of medication on the container label (there are many different strengths in similar packaging).
- ✓ **Do** give acetaminophen every 4-6 hours until the fever is less than 101⁰F.
- ✓ **Do** always use the dropper, syringe, or Popsicles, or flat sodas.
- ✓ **Do** give the child adequate fluids.

- ❖ **Do not** exceed the recommended dosage.
- ❖ **Do not** use items such as kitchen knives or spoons. Also never use spoons, droppers, or syringes that are not being used.
- ❖ **Do not** use a fan to blow on the child.
- ❖ **Do not** give medications to a child who is vomiting.
- ❖ **Do not** give medications to a child who is having a seizure.
- ❖ **Do not** leave any medication unattended.
- ❖ **Do not** leave any medication out of the reach of children. Keep all medications in their original containers.
- ❖ **Do not** sponge the child with cold water to lower the child's temperature.
- ❖ **Do not** give cold-water energy drinks.
- ❖ **Do not** rely on axillary (underarm) temperature.

CONTACT THE DOCTOR WHEN YOUR CHILD HAS A FEVER AND:

The child has a previous history of a convulsion or seizure.

The child has

The child has

The child is ac

The child has asthma, cystic fibrosis, pneumonia, heart, or kidney prob

The child has

The child has

The child is no

The child has

The child is ha

The child com out decreases, or if the urine becomes darker in color

The child has

The child is ge dry tongue, sunken fontanelles (which are the soft spots of the skull) or "pinch test" on the stomach the skin remains together (prick test) (on).

The child has and then returns.

The child has

The child has

The child is co

The child has

The child has c

The child has

The child appe

The child has

The child's co

The child is sle t to awaken.

The child has reason.

The child is les

The child has

The child is ur greater than 101⁰F (38.3⁰C) rectally.

The child is be temperature of 101⁰F (38.3⁰C) or higher

and has a cou

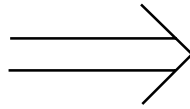
The child is be a temperature of 103⁰F (39.4⁰C) or higher

and has a cou

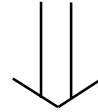
HOW A FEVER IS PRODUCED

EXOGENOUS PYROGENS

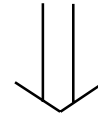
- Infections
- Toxins
- Inflammation



Enters the Blood Stream



Activates macrophages and other cells in the body which produce cytokines (endogenous pyrogens)



CYTOKINES (Endogenous Pyrogens)

- Interleukin-1

IBU

reduces
prostaglandin
cyclooxygenase
production

ACETAMINOPHEN

reduces fever by inhibiting cyclooxygenase in the brain which inhibits prostaglandin production (acetaminophen has very little cyclooxygenase inhibition in peripheral tissues).

FEVER



The body goes into heat conservation and heat production mode until the new “thermostat setting” is reached and maintained.
e.g. decrease blood circulation near the skin surface, seeking warm environment, putting on more clothes or blankets, or shivering to increase heat production.

IBUPROFEN DOSAGE CHART

AGE GROUP	6-11 Months	12-23 Months	2-3 Years	4-5 Years	6-8 Years	9-10 Years	11-12 Years	12-14 Years
WEIGHT (pounds)	13-17	18-23	24-35	36-47	48-59	60-71	72-95	Over 95
WEIGHT (kilograms)	6-7	8-10	11-16	17-21	22-26	27-32	33-43	Over 44
Dose of Ibuprofen IF FEVER IS AT OR UNDER 102.5°F 5 mg/kg	25 mg	50 mg	75 mg	100 mg	125 mg	150 mg	200 mg	225 mg
Ibuprofen Suspension 100 mg/5 ml	[Redacted]							2 1/4 teaspoons (11.25 ml)
Ibuprofen Tablets 200 mg								4 1/2 tablets
Ibuprofen Tablets 100 mg								2 1/4 tablets
Ibuprofen Drops 50 mg / 1.25 ml (dropper)								
Dose of Ibuprofen IF FEVER IS OVER 102.5°F 10 mg/kg	[Redacted]							450 mg
Ibuprofen Suspension 100 mg/5 ml								4 1/2 teaspoons (22.5 ml)
Ibuprofen Tablets 200 mg								9 tablets
Ibuprofen Tablets 100 mg								4 1/2 tablets
Ibuprofen Drops 50 mg / 1.25 ml (dropper)	1 dropper (1.25 ml)	2 droppers (2.5 ml)	3 droppers (3.75 ml)					
MAXIMUM TOTAL DOSAGE PER DAY 40 mg/kg	240 mg to 280 mg	320 mg to 400 mg	440 mg to 640 mg	680 mg to 840 mg	880 mg to 1040 mg	1080 mg to 1280 mg	1320 mg to 1720 mg	1760 mg to 1800 mg

Keep all medications out of the reach of children.

Ibuprofen is given **every 6 to 8 hours** with a maximum of 4 doses in 24 hours.

The dose is 2.27 mg/pound (5 mg/kg) every 6 to 8 hours if temperature is at or under 102.5°F

The dose is 4.54 mg/pound (10 mg/kg) every 6 to 8 hours if temperature is above 102.5°F

Maximum dose is 18 mg/pound/day (40 mg/kg/day)

NOTE: "teaspoon" is used as a reference in this chart. It DOES NOT refer to a common kitchen teaspoon.

ALL
RESPONSIBLE PARENTS SHOULD HAVE A
THERMOMETER,
ACETAMINOPHEN,
AND
IBUPROFEN
IN THE HOME FOR THE CARE OF THEIR
CHILDREN WITH FEVER.

Additional copies of this booklet "Fever In Children" can be obtained by writing:

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West Columbia, TX 77486

<http://www.stores.ebay.com/starrvisionproductions>