

# What is Reye's Syndrome?

Reye's Syndrome, a deadly disease, strikes swiftly and can attack any child, teen, or adult without warning. All body organs are affected with the liver and brain suffering most seriously. While the cause and cure remain unknown, research has established a link between Reye's Syndrome and the use of aspirin and other [salicylate containing medications, over the counter products, and topical use products](#).

Reye's Syndrome is a two-phase illness because it is almost always associated with a previous viral infection such as influenza (flu), cold, or [chicken pox](#). Scientists do know that Reye's Syndrome is not contagious and the cause is unknown. Reye's Syndrome is often misdiagnosed as encephalitis, meningitis, diabetes, drug overdose, poisoning, Sudden Infant Death Syndrome, or psychiatric illness.

Reye's Syndrome tends to appear with greatest frequency during January, February, and March when influenza is most common. Cases are reported in every month of the year. An epidemic of flu or chicken pox is commonly followed by an increase in the number of cases of Reye's Syndrome.

When Reye's Syndrome develops, it typically occurs when a person is beginning to recover from a viral illness.

Abnormal accumulations of fat begin to develop in the liver and other organs of the body, along with a severe increase of pressure in the brain. Unless diagnosed and treated successfully, death is common, often within a few days, and even a few hours. A person's life depends upon early diagnosis. Statistics indicate an excellent chance of recovery when Reye's Syndrome is diagnosed and treated in its earliest stages. The later the diagnosis and treatment, the more severely reduced are the chances for successful recovery and survival.

Stage I Symptoms	Stage II Symptoms	Stage III Symptoms	Stage IV Symptoms
Persistent or continuous vomiting Signs of brain dysfunction: Listlessness Loss of pep and energy Drowsiness	Personality changes: Irritability Aggressive behavior	Disorientation: Confusion Irrational behavior Combative	Delirium Convulsions Coma

**NOTE:** The symptoms of Reye's Syndrome in infants do not follow a typical pattern. For example, vomiting may be replaced with diarrhea and infants may display irregular breathing.

## Suspect Reye's in an Infant with:

- \* Diarrhea, but not necessarily vomiting
- \* Respiratory disturbances such as hyperventilation or apneic episodes, seizures and hypoglycemia are common
- \* Elevated SGOT-SGPT (SAT-ACT) [usually 200 or more units] in the absence of jaundice

Reye's Syndrome should be suspected in a person if this pattern of symptoms appear during, or most commonly, after a viral illness. Not all of the symptoms have to occur, nor do they have to be displayed in this order. Fever is not usually present. Many diseases have symptoms in common. Physicians and medical staff in emergency rooms who have not had experience in treating Reye's Syndrome may misdiagnose the disease.

Suspect Reye's in a Patient with:	For Early Diagnosis:	Differential Diagnosis:	Initial Treatment:
Unexpected vomiting following any viral illness such as a flu-like upper respiratory infection or chicken pox (usually no diarrhea) Elevated SGOT-SGPT (SAT-ACT) [usually 200 or more units] in the absence of jaundice Signs of disturbed brain function characterized by: * Lethargy * Staring * Stupor * Agitated delirium * Screaming * Drug reaction-like behavior * Extensor spasms * Decerebrate rigidity * Aspirin poisoning-like symptoms * Coma	* Vomiting, think Reye's * Emergency SGOT-SGPT (SAT-ACT) * Elevated blood NH3 * Hypoglycemia and hepatomegaly may be present	* Meningitis * Encephalitis * Diabetes * Drug Overdose * Sudden Infant Death * Toxic Ingestion * Head Trauma * Renal or Hepatic Failure * Poisoning Reye's is often mistaken for the diagnosis listed above, so encourage your doctor to look twice and to consider ruling out Reye's!	* 10% Glucose in maintenance salt solution * Maintain airway and brain oxygen * Consult a teaching hospital or children's hospital

# Fact Sheet

National Reye's Syndrome Foundation



## Tweens & Teens – Wise Choices; Using Over-the-Counter Medications Wisely

Medicine Cabinets and Store Shelves are filled with medicines you can buy without a prescription. And you need to know that just because a drug is available over the counter (OTC), that doesn't mean it's always safe or free of side effects.

You need to take OTC drugs with the same caution as drugs prescribed by your doctor. Even more care is needed if you use more than one prescription and or OTC product at the same time.

There are some OTC drugs that should not be taken if you have certain medical problems. You should always ask your parent, pharmacist or doctor for advice before taking any OTC medicine.

Until after the age of 19, you should not take products containing aspirin or salicylates, especially when you have a viral illness, chickenpox, flu, or symptoms that might be the flu (this includes most colds). Those who take aspirin and other salicylates during these illnesses can develop a life-threatening disease called Reye's Syndrome.

As much as you would like to think that nothing can affect you – that you are young and healthy and always will be – the real truth is that things **can** affect you, stress **is** real, people **do** get terribly sick, and those we know and love do in fact affect our lives, sometimes tragically.

You do have one very special Power. You have the Power of Choice. YOUR choices will ALWAYS determine where you will go in life, and how. Everyday choices can either be good for you or bad for you. You get ONE life, and one life only. Where do you see yourself in 1 year. In 5 years? 10 years? Will the choices you make today get you there? YOU have the Power of Choice. Use that Power Wisely.

- **Pause – Think it Out!** Take a moment; is what you are about to do *–really–* in your best interest?
- **Pause – Check It Out!** Take a moment; what kind of problem will your choice create for you?
- **Pause – Research it!** Take a moment; talk to someone who *–really, really–* knows; a parent, caregiver, doctor, nurse, guidance counselor, or teacher.

- Read the Labels on Everything!
- Don't Share Medicines with family or friends!
- Talk to your Doctor – They do want to hear what you have to ask or say!
- Don't try to diagnose why you are sick – let a doctor do that!
- Don't take that aspirin for a headache – or for any other reason – it could kill you!

If you are feeling stressed; Pause – take a break – let others know you are feeling stressed and need a break – we all need a break from time to time. Do something extra special for yourself, that will help you cope with the stress.

### What is Reye's Syndrome?

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## REYE'S SYNDROME

Reye's Syndrome is a very serious disease that you should know about. Some people develop Reye's Syndrome as they are getting over a viral illness, such as the flu or chicken pox. Reye's Syndrome usually affects people from infancy through young adulthood; however, no age group is immune. Although Reye's generally occurs when someone is recovering from any viral illness, it can develop 3 to 5 days after the onset of the illness. Its main targets are the liver and brain, it is not contagious, and too often is misdiagnosed as encephalitis, meningitis, diabetes, poisoning, drug overdose, or sudden infant death.

Early diagnosis is crucial. An individual should be watched during the next 2 to 3 weeks following a viral illness for these symptoms, usually occurring in this order:

- \*Relentless or continuous vomiting
- \*Listlessness (loss of pep and energy with little interest in their environment)
- \*Drowsiness (excessive sleepiness)
- \*Personality change (such as irritability, slurred speech, sensitivity to touch)
- \*Disorientation or confusion (unable to identify whereabouts, family members or answer questions)
- \*Combativeness (striking out at those trying to help them)
- \*Delirium, convulsions or loss of consciousness

Reye's Syndrome should be suspected in anyone who vomits repeatedly. Phone your doctor immediately if these symptoms develop. Voice your concern about Reye's Syndrome. If your physician is unavailable, take the person to an Emergency Room promptly. Two liver function tests (SGOT, SGPT) can be done to determine the possibility of Reye's Syndrome. There is a 90% chance of recovery when the syndrome is treated in its earliest stages by physicians and nurses experienced in the treatment of Reye's.

Studies have shown that using aspirin or aspirin-containing medications to treat the symptoms of viral illnesses increases the chance of developing Reye's Syndrome. If you or a member of your family have a viral illness, do not use aspirin or aspirin-containing medications. In fact, you should consult your physician before you take any drugs, particularly aspirin or anti-nausea medicines, to treat flu, chicken pox or any viral illness. Anti nausea medicines may mask the symptoms of Reye's Syndrome.

The National Reye's Syndrome Foundation (NRSF), the U.S. Surgeon General, the Food and Drug Administration and the Centers for Disease Control and Prevention recommend that aspirin and combination products containing aspirin not be taken by anyone under 19 years of age during fever-causing illnesses.

Aspirin is part of the salicylate family of medicines. Another name for aspirin is acetylsalicylate; some drug labels may use the words acetylsalicylate, acetylsalicylic acid, salicylic acid, salicylate, etc., instead of the word aspirin. Currently, there is no conclusive data as to whether other forms of salicylates are associated with the development of Reye's Syndrome. Until further research has answered this question, the NRSF recommends that products containing any of these substances not be taken during episodes of viral infections.

The NRSF is a non-profit, tax-exempt organization with affiliates located in 50 states. The NRSF has pioneered the movement to disseminate knowledge about the disease in an effort to aid in early diagnosis and also provides funds for research into the cause, cure, care, treatment and prevention of Reye's Syndrome.

For additional information, please contact:

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[reyessyndrome.wordpress.com](http://reyessyndrome.wordpress.com)



## Medications Containing Aspirin (Acetylsalicylate) and Aspirin-Like Products

Epidemiologic research has shown an association between the development of Reye's Syndrome and the use of aspirin-type products for treating symptoms of influenza-like illnesses and chicken-pox. The National Reye's Syndrome Foundation, U.S. Surgeon General, the Food and Drug Administration, and Centers for Disease Control and Prevention recommend that aspirin and combination products containing aspirin not be given to children or teenagers who are suffering from one of these illnesses. This listing shows products containing aspirin or salicylate compounds. **THIS IS NOT A COMPLETE LIST!** Some medication labels may use the words acetylsalicylate, acetylsalicylic acid, salicylic, salicylamide, phenyl salicylate, etc., instead of the word aspirin. There is not data as to other forms of salicylate other than aspirin associated with the development of Reye's Syndrome but until further research has answered this question, we recommend products listing these substances not be used at all in children and adolescents, because a virus may already be present before symptoms appear. Product ingredients may be reformulated periodically, so always check the label. When in doubt ask your doctor or pharmacist. -- Note: Be cautious when using Herbal Remedies as some contain Salicylate!

NON-PRESCRIPTION PRODUCTS		PRESCRIPTION PRODUCTS		PRESCRIPTION PRODUCTS (Cont.)	
Alka-Seltzer*	Bayer	Aspirin 81 Adult Low Dose Aspirin	Richwood	Magsa Tablets	U.S. Pharmaceutical
Anacin*	Whitehall Robins	Aggrenox Capsules	Boehringer-Ingelheim	Methocarbamol & Aspirin Tablets	Par
Ascriptin*	Novartis	Butalbital, Aspirin, Caffeine & Codeine		Mono-Gesic Tablets	Schwarz
Bayer Aspirin*	Bayer	Phosphate Capsules, USP	Watson	Myogeisc	U.S. Pharmaceutical
BC Powder*	Block	Carisoprodol and Aspirin Tablets	Par	Norgesic Forte Tablets	3M
Bufferin*	Bristol-Myers	Damaso-P 5	Mason Pharm	Norgesic Tablets	3M
CVS Aspirin*	CVS Pharmacy	Darvon Compound-659	Lily	Oxycodone and Aspirin Tablets C-II	Watson
Doan's*	Novartis	Disacid Capsules and Tablets	3M	PC Cap	Aira Laboratories
Ecotin*	SK Beecham	Easprin Delayed-Release Tablets	Lotus Biochemical	Parasa 5/500 5 PC Cap 9	ECR Pharmaceuticals
Excedin*	Bristol-Myers	Empirin with Codeine No 3 & 4	Glaxo Wellcom	Percodan Tablets	EndoLabs
Goody's Aspirin*	Block	Endocin Tablets, USP Gil	Endo Generics	Propoxyphene Compound 65	
Kaopectate*	Pharmacia	Equagesic Tablets	Wyeth-Ayerst	Capsules (CIU)	Teva
Madaox*	Novartis	Fiorinal Capsules and Tablets	Novartis	Robaisa Tablets	Robins
Norwich Aspirin*	Chatterm	Fiorinal with Codeine Capsules	Novartis	Roxiprin Tablets	Roxane
Rite Aid Aspirin*	Rite Aid	Fioral with Codeine Capsules	Geneva	Safflex Tablets	Carrick
Pamprin*	Chatterm	Gelpirin Tablets	Aira	Salsalate Tablets	Duramed
Pepto-Bismol*	Proctor and Gamble	Halfprin Tablets	Kramer	Soma Compound Tablets	Wallace
St. Joseph's	Schering-Plough	Helidac therapy	Prometheus Labs	Synalgos-DC Capsules	Wyeth-Ayerst
Vanquish*	Bayer	Lortab ASA Tablets	UCB	Talwin Compound	Sandoz-Winthrop
YSP*	Carlsbad Technology	Magan Tablets	Savage	Trilistate Liquid & Tablets	Purdue Frederick

*To conserve space on our list, we have listed non-prescription products by brand name only. Please be aware these products come in many forms, strengths and flavors.*

**Be sure to check the label for the Reye's Syndrome warning and/or any of the ingredients names listed in the above paragraph.**

The following is a list of Antiemetics. Antiemetics are used to stop nausea. While Antiemetics do not contain aspirin, they can be associated with Reye's Syndrome because medications used to stop nausea can mask one of the first symptoms of Reye's. When every second counts in diagnosing Reye's it is vital for parents to question use of Antiemetics when prescribed during a viral illness.

Aloxi Injection	MGI	Marinol Capsules	Unimed	Zofran Injection Premixed	GlaxoSmithKline
Anzemet Injection & Tablets	Sanofi-Aventis	Phenergan Suppositories & Tablets	Wyeth	Zofran Oral Solution, Tablets, &	
Emeral Capsuls	Merck	Transderm Scope Transdermal Therapeutic		Orally Disintegrating Tablets	GlaxoSmithKline
Kytril Injection, Oral Solution, or Tablets	Roche Laboratories	System Zofran Injection	Novartis Consumer GlaxoSmithKline		

Many topical products also contain forms of salicylates. While these products are not ingested through the mouth, certain ingredients may be absorbed through the skin and therefore a potential risk where Reye's Syndrome is concerned. Be sure to check ingredient labels. These products are not ingested and as such, not required to carry a warning. Check out our website or contact the foundation for a list of topical products we know contain aspirin.

For More Information Contact the NRSF:  
Toll Free: (800) 233-7393

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