

Excipients, Preservatives and Dyes in Children's Medicines

What are Excipients?



Most medicines are made of an active ingredient plus excipients. Excipients are fillers, dyes, and flavors. Some excipients act as preservatives so a medicine can have a longer expiration date. Other excipients are for taste and color. Most excipients do not have any effect on the body and do not cause harm. However, some children may have side effects when they take medicines with certain excipients.

Do Medicines contain Harmful Dyes?

Dyes are excipients used to add color to medicine. Dyes may be used to color medicines to match their flavor. For example, grape flavored medicines may be colored purple. Dyes may also be used to provide color for liquids, tablets or capsules to help with identification. Many medicines come in dye-free options.



Most dyes are not harmful except in high concentrations. The most common colors that children may react to are red and yellow. Ask your pharmacist or physician about the dyes used in your medicine if you are concerned.

What are Food Derivatives in Medicines?



Some excipients come from food or food derivatives. Examples would be lactose which comes from cow's milk, or peanut oil which comes from peanuts. These types of excipients usually are not enough to cause an allergic reaction as they are added to medicines in very small amounts. However, children should avoid medicines containing excipients from foods they are allergic to.

Allergic Reaction vs. Sensitivity

What is the difference between an allergic reaction and a drug sensitivity? It is important to understand the difference. You need to know if your child is having a reaction that needs urgent medical attention.

Allergic reaction

An allergic reaction is an unexpected event that occurs after a medicine is taken. It can cause the body to have an immune response such as itchy eyes or mouth, or a rash with raised red patches on the skin (hives). An allergic immune response can lead to a life-threatening reaction known as anaphylaxis. Anaphylaxis is a medical emergency. Symptoms are difficulty breathing, swelling of face and/or throat, itching with or without hives, decrease blood pressure and possible loss of consciousness. Calling 911 is necessary if any of these symptoms occur.

Drug sensitivity

A drug sensitivity is a known side effect of a drug. Reactions may be uncomfortable but are not going to cause harm. Symptoms are nausea, stomach upset, sleepiness, muscle pain, or headache.

Some of the most common excipients are listed in the table below. If your child is sensitive to any of these excipients, always review the ingredient list on a medicine package before administration.

Excipient	Possible Reaction
Propylene Glycol	Skin reactions, itching
Polysorbate 20 and 80	Skin reactions, wheezing Avoid in Children under 1 year of age
Saccharin	Itching, skin sensitivity to sunlight
Ethanol	Drug interactions affecting absorption, breakdown and removal of other drugs; impairment of muscle coordination
Menthol	Worsening asthma symptoms
Lactose from cow's milk	Itching, severe upset stomach
Peanut oil	Itching, wheezing
Azo Dyes (yellow)	Itching, wheezing
Xanthene Dyes (red)	Skin sensitivity to sunlight
Aspartame / Phenylalanine	Skin reactions, itching; Avoid in patients with phenylketonuria (PKU)

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