

Name that Drug! The Side-Effect Game

By Norman M. Goldfarb

When a people are sick and have to decide whether to take a drug that may cause side effects, they can make a risk/benefit decision, weighing the risks and benefits as they see fit. They are within their rights to risk a 10% chance of death for a 10% chance that their quality of life will improve. They will fiercely defend their right to make that choice for themselves.

In contrast, the public has made it clear that, for the population in general, the level of risk it will tolerate in drugs is close to zero. In other words, many patients are risk-tolerant for themselves, but risk-averse for people they have never met.

One possible explanation for this apparent contradiction is that people know they do not, in practice, make careful risk/benefit decisions. In fact, most people do not read drug labels and do not understand the risks associated with medicines. Otherwise, how can you explain that, every day, millions of people take drugs that offer modest – or no – benefits in total disregard of potentially serious side effects?

This article presents a series of questions about common side effects of common medications. Your challenge is to identify the drugs.

Table 1 presents a glossary of some side effects not used in common parlance. Have you taken any medications with these potential side effects?

Table 1. Glossary of Side Effects

Angioedema	An allergic swelling of the skin
Bronchospasm	Constriction of the bronchial air passages of the lung
Dyspepsia	A type of indigestion
Dyspnoea	Difficult breathing
Flatulence	Excessive gas in the digestive tract
Paraesthesia	A skin sensation, such as burning, prickling, itching, or tingling, with no apparent physical cause
Pruritis	Severe itching, often of undamaged skin
Rhinitis	Inflammation of the nasal mucous membranes
Tinnitus	A sound in one or both ears, such as buzzing, ringing or whistling, occurring without an external stimulus

Table 2 presents simplified risk profiles for eight popular over-the-counter medicines. Only some of the most common side effects are listed; rare side-effects, even if life-threatening, are not included. There is a good chance you've taken at least one of these drugs. Do you recognize any of them from their potential side effects? If you don't know what one of the words means, don't worry; that side effect will probably never happen to you.

Table 2. Side Effects of Popular Medicines¹

Drug	Common Side Effects
A	Nausea, Vomiting, Dizziness, Diarrhea, Flatulence, Constipation, Rash, Fatigue, Paraesthesia, Pruritis
B	Nausea, Dyspepsia, Vomiting, Dizziness, Diarrhea, Rash, Paraesthesia, Pruritis, Headache
C	Dyspepsia, Drowsiness, Rash, Pruritis, Nervousness, Tinnitus, Depression, Drowsiness, Insomnia, Blurred vision
D	Nausea, Dyspepsia, Vomiting, Dizziness, Drowsiness, Constipation, Rash, Fatigue, Abdominal Distension
E	Nausea, Dyspepsia, Vomiting, Ulceration, Skin Eruptions, Angioedema, Rhinitis, Bronchospasm, Dyspnoea
F	Diarrhea, Excessive Urination, Kidney Stones
G	Nausea, Flatulence, Abdominal Distension, Belching
H	Dizziness, Drowsiness, Nausea, Vomiting, Diarrhea, Nausea, Vomiting, Stomach Pains, Headache, Skin Rash, Hives

Table 3 presents the same drugs, but with a clue: how they are used.

Table 3. Side Effects of Popular Medicines

Drug	Uses	Common Side Effects
A	Acid reflux	Nausea, Vomiting, Dizziness, Diarrhea, Flatulence, Constipation, Rash, Fatigue, Paraesthesia, Pruritis
B	Fungicide	Nausea, Dyspepsia, Vomiting, Dizziness, Diarrhea, Rash, Paraesthesia, Pruritis, Headache
C	Analgesic, anti-inflammatory and anti-pyretic	Dyspepsia, Drowsiness, Rash, Pruritis, Nervousness, Tinnitus, Depression, Drowsiness, Insomnia, Blurred Vision
D	Antidiarrheal	Nausea, Dyspepsia, Vomiting, Dizziness, Drowsiness, Constipation, Rash, Fatigue, Abdominal Distension
E	Analgesic, anti-pyretic and anti-inflammatory	Nausea, Dyspepsia, Vomiting, Ulceration, Skin Eruptions, Angioedema, Rhinitis, Bronchospasm and Dyspnoea
F	Vitamin	Diarrhea, Excessive Urination, Kidney Stones
G	Anti-acid	Nausea, Flatulence, Abdominal Distension, Belching
H	Expectorant	Dizziness, Drowsiness, Nausea, Vomiting, Diarrhea, Nausea, Vomiting, Stomach Pains, Headache, Skin Rash, Hives

Table 4 presents the same drugs, but with a big clue: their principal ingredients.

Table 4. Side Effects of Popular Medicines

Drug	Principal Ingredient	Uses	Common Side Effects
A	omeprazole	Acid reflux	Nausea, Vomiting, Dizziness, Diarrhea, Flatulence, Constipation, Rash, Fatigue, Paraesthesia, Pruritis
B	ketoconazole	Fungicide	Nausea, Dyspepsia, Vomiting, Dizziness, Diarrhea, Rash, Paraesthesia, Pruritis, Headache
C	ibuprofen	Analgesic, anti-inflammatory and anti-pyretic	Dyspepsia, Drowsiness, Rash, Pruritis, Nervousness, Tinnitus, Depression, Drowsiness, Insomnia, Blurred vision
D	loperamide hydrochloride	Antidiarrheal	Nausea, Dyspepsia, Vomiting, Dizziness, Drowsiness, Constipation, Rash, Fatigue, Abdominal Distension
E	acetylsalicylic acid	Analgesic, anti-pyretic and anti-inflammatory	Nausea, Dyspepsia, Vomiting, Ulceration, Skin Eruptions, Angioedema, Rhinitis, Bronchospasm and Dyspnoea
F	ascorbic acid	Vitamin	Diarrhea, Excessive Urination, Kidney Stones
G	sodium bicarbonate	Anti-acid	Nausea, Flatulence, Abdominal Distension, Belching
H	guaifenesin	Expectorant	Dizziness, Drowsiness, Nausea, Vomiting, Diarrhea, Nausea, Vomiting, Stomach Pains, Headache, Skin Rash, Hives

Table 5 presents the same drugs, but with a really big clue: their trade names.

Table 5: Side Effects of Popular Medicines

Drug	Tradename	Principal Ingredient	Uses	Common Side Effects
A	Prilosec	omeprazole	Acid reflux	Nausea, Vomiting, Dizziness, Diarrhea, Flatulence, Constipation, Rash, Fatigue, Paraesthesia, Pruritis
B	Nizoral	ketoconazole	Fungicide	Nausea, Dyspepsia, Vomiting, Dizziness, Diarrhea, Rash, Paraesthesia, Pruritis, Headache
C	Advil	ibuprofen	Analgesic, anti-inflammatory and anti-pyretic	Dyspepsia, Drowsiness, Rash, Pruritis, Nervousness, Tinnitus, Depression, Drowsiness, Insomnia, Blurred vision
D	Imodium	loperamide hydrochloride	Antidiarrheal	Nausea, Dyspepsia, Vomiting, Dizziness, Drowsiness, Constipation, Rash, Fatigue, Abdominal Distension
E	Aspirin	acetylsalicylic acid	Analgesic, anti-pyretic and anti-inflammatory	Nausea, Dyspepsia, Vomiting, Ulceration, Skin Eruptions, Angioedema, Rhinitis, Bronchospasm and Dyspnoea
F	Vitamin C	ascorbic acid	Vitamin	Diarrhea, Excessive Urination, Kidney Stones
G	Alka-Seltzer	sodium bicarbonate	Anti-acid	Nausea, Flatulence, Abdominal Distension, Belching
H	Robitussin Chest Congestion	guaifenesin	Expectorant	Dizziness, Drowsiness, Nausea, Vomiting, Diarrhea, Nausea, Vomiting, Stomach Pains, Headache, Skin Rash, Hives

Congratulations! You have scored 100%, qualifying you as an expert in drug side effects. For ten extra points, what is the probability of a "common" side effect occurring?

Reference

1. South African Electronic Package Inserts, last accessed 12/9/08 at <http://home.intekom.com/pharm/>

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