

Classification of Drug Interaction and Its Categories

Hemraj Kathayat*

Department of Pharmaceutical Analysis, Indian Institute of Toxicology Research, Lucknow, Uttar Pradesh,
India

Short Communication

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***For Correspondence:**

Hemraj Kathayat,
Department of Pharmaceutical
Analysis, Indian Institute of
Toxicology Research, Lucknow,
Uttar Pradesh, India

E-mail: KathayatH333@gmail.com

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ABSTRACT

Drug interactions are when a drug is taken with other substances in such a way that the medication's effect on the body is altered. This can make the medication less or more effective than it should have been, or create unexpected side effects. A drug is any chemical substance that affects the physiology or psychology of an animal when eaten. Food and substances that give nutritional support are typically distinguished from drugs.

INTRODUCTION

If you take any pharmaceuticals, have particular health conditions, or see more than one doctor, you must be extremely aware of your medications. You should also tell all of your doctors about any medications, herbs, supplements, or vitamins you're taking. Even if you can only use one drug, it's crucial to talk to your doctor or pharmacist about it to rule out any complicated interactions. This refers to both prescription and over-the-counter medications.

Drugs can be divided into three categories:

1. Interactions between drugs (drug-drug interactions),
2. Drug interactions with food (drug-food interactions),
3. Interactions with disease states (drug-disease interactions).

It's necessary to be aware of potential drug interactions, as they might result in major symptoms or treatment responses.

Interactions between drugs

If two or more drugs react with one another, this one is described as a drug-drug interaction. These medications can be a mix of professional and Over-The-Counter (OTC) medications^[1,2]. Serious drug interactions are more likely to happen with drugs that have a narrow therapeutic range (small variation among therapeutic and deadly doses).

For instance: Because antibiotics affect liver enzymes, causing digoxin to be metabolized (inactivated) slower, using digoxin with antibiotics like erythromycin or clarithromycin will enhance the toxicity of digoxin. Similarly, using methotrexate and ibuprofen at the same time may exacerbate propranolol toxicity due to ibuprofen's reduction of kidney excretion.

Drug interactions with food

When drugs react with foods, dietary supplements, or beverages, these interactions occur (including alcohol). Some medicines can impair the body's ability to absorb nutrition. Similarly, certain plants and foods can reduce or enhance the effects of a medicine. Drug interactions can be induced by certain meals. Because the high vitamin K content of green leafy vegetables like vegetables, spinach, and watercress negates the impact of warfarin, people taking it must avoid eating large amounts of these.

For instance: Grapefruit juice might interact with some statins (drugs used to treat high cholesterol). If someone on one of these statins consumes a lot of grapefruit juice, too much of the drug may stay in their system, raising their risk of liver damage or kidney failure.

Interactions with disease states

When the administration of a drug affects or worsens a condition or disease, this is referred to as a drug interaction. Furthermore, certain medical problems can raise the likelihood of drug adverse effects ^[3-5]. Before your doctor recommends a new prescription, always tell him or her about your condition or disease. Kidney or liver disease, diabetes, asthma, cardiac issues, epilepsy, and high or low blood pressure are all conditions that put patients at risk for drug interactions. Interactions between drugs and diseases are more common in the elderly, who have more diseases.

For instance: Kidney illness and metformin (a diabetes medication). Metformin should be used at a lesser dose or not at all by people who have kidney disease. This is due to the fact that metformin can build up in the kidneys of persons with diabetes, raising the risk of serious side effects.

CONCLUSION

Individuals ought to illuminate medical services experts regarding their condition and any meds/dietary enhancements that they are taking when visiting the specialist or buying drugs at the drug store. Assuming a medication connection is unavoidable, the patient should screen the security and viability of the medications.

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