

## Brief Note on Drug Interactions

Sumit Tiwari \*

Department of Pharmaceutical Sciences, University of Kashmir, Kashmir, India

### DESCRIPTION

A drug interaction is a change in the action or side effects of a drug caused by concomitant administration with a food, beverage, supplement, or another drug. A cause of a drug interaction involves one drug which alters the pharmacokinetics of another medical drug. Alternatively, drug interactions result from competition for a single receptor or signaling pathway. Both synergy and antagonism occur during different phases of the interaction between a drug and an organism. Even if you take medication, it's good to consult a doctor or pharmacist about the drugs you're using to identify possible interactions. This advice relates to both prescription and non-prescription drugs. A drug response happens while there is interplay between or extra prescription tablets. One example is the interplay between warfarin (Coumadin), an anticoagulant (blood thinner), and fluconazole (Diflucan), an antifungal medicine. There is a response among a drug and a non-prescription treatment. These consist of Over-The-Counter (OTC) medicines, herbs, nutrients, or supplements. An example of this type of interaction can occur between a diuretic and ibuprofen (Advil). Ibuprofen may also reduce the diuretic's effectiveness due to the fact ibuprofen frequently reasons the frame to keep salt and fluid. Ibuprofen may reduce the diuretic's effectiveness because ibuprofen often causes the body to retain salt and fluid. This occurs when a drug's impact is different by the use of food or beverages.

Some statins (drugs used to treat high cholesterol) can interact with grapefruit juice. For example, if someone on one of these statins consumes a lot of grapefruit juice, too much of the drug may remain in their system, raising their risk of liver damage or kidney failure. Rhabdomyolysis is another possible side effect of the statin-grapefruit juice interaction. When skeletal muscle breaks down, myoglobin, a protein, is released into the bloodstream. Kidney injury can be caused by myoglobin. When the use of a drug changes or worsens a condition or disease, this is called a drug-drug interaction.

Furthermore, certain medical conditions can increase the risk of drug side effects. Some decongestants used to treat cold, and can raise blood pressure. For persons with high blood pressure, this is a potentially deadly interaction (hypertension). Metformin (a diabetes medication) and kidney damage are another example. 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 people with diabetes, increasing the risk of serious side effects. Specific laboratory tests may be hampered by some drugs. This can lead to erroneous test results. Tricyclic antidepressants have been shown to interfere with skin prick tests, which are used to determine whether a person has allergies. Personal habits can influence whether or not a drug interaction occurs and how dangerous it is. Specifics regarding your medications, such as dosage, formulation, and how you take them, can all affect how they work. Individual genetic differences can cause the same drug to behave differently in different bodies. Some people process medications more quickly than others as a result of their unique genetic code. This could cause drug levels to drop or rise faster than expected. Some medications are dosed based on a person's weight. Weight changes may have an impact on dose as well as the probability of drug interactions. As a result, if your weight changes significantly, it may need to adjust the dosage of some drugs. Our bodies change as we get older in many ways, some of which may have an impact on our medications. With age, the kidneys, liver, and circulatory system may slow down. Drug interactions can be influenced by differences in the sexes, such as anatomy and hormones. For example, the recommended dose of zolpidem (Ambien) for women has been reduced to half that of men. This occurred after studies revealed that women were more likely than men to have high levels of stress. The rate at which medications are absorbed and processed in the body is influenced by a variety of factors. Such characteristics may influence the appropriate dose for each individual, which may be higher or lower than the standard dose. This is just another reason why doctor must be aware of all of your current medications before prescribing a new one.

**Correspondence to:** Dr. Sumit Tiwari, Department of Pharmaceutical Sciences, University of Kashmir, Kashmir, India, E-mail: sumitlifescience@gmail.com

**Received:** 03-Jan-2022, Manuscript No. PACO-22-15652; **Editor assigned:** 05-Jan-2022, PreQC No. PACO-22-15652 (PQ); **Reviewed:** 19-Jan -2022, QC No. PACO-22-15652; **Revised:** 24-Jan -2022, Manuscript No. PACO-22-15652 (R); **Published:** 31-Jan -2022, DOI: 10.35248/2471-2698.22.143

**Citation:** Tiwari S (2022) Brief Note on Drug Interactions. Pharm Anal Chem Open Access. 7: 143.

**Copyright:** © 2022 Tiwari S. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.