How to Prevent Medication Interactions

Any medication (prescription, OTC, herbal) can cause side effects and interactions.

Medication interactions fall into three categories:

1. Drug-drug interactions – occurs when two or more medications react with each other
2. Drug-food/beverage interaction – such as alcohol or grapefruit which can interfere with a medication’s effect – AND, sometimes it is better to take a medication with food
3. Drug-disease interaction – such as a person with HTN taking a decongestant which will raise their BP

Our charts warn us of drug-drug interactions with a 1 (absolute contraindication), a 2 (severe interaction), or a 3 (moderate interaction). We always notify the physician when we get a level 1 or 2 interaction.

A level one interaction means those two medications have been studied and should definitely not be used together. That does NOT mean that if we tell the patient to take one in the morning and the other in the evening that they will be fine. A level one interaction means that no person should be taking those two medications, absolutely, positively.

A level two interaction means the two medications may cause a severe interaction such as the above example of a decongestant increasing BP. Again, telling the patient to take those two medications at different times of the day will NOT mean there will be no interaction. A level two interaction means that generally, a person should not be taking those two medications, but a physician must make the decision about taking the risk of approving two medications with a level two interaction.

A level three interaction means the two medications may cause a moderate interaction – such as stomach upset, or drowsiness, or impaired judgement so that one should not be operating machinery. This is the only type of medication interaction which the advice of telling the person to take the medications at different times may be acceptable.

So, if there is a level two interaction, why won’t it help to tell the patient to take the medications at different times? Because of how long a medication remains in our systems. A drug’s half-life means the amount of time required for the amount of drug in the body to be reduced by half. But, even if a medicine like Valium has a half-life of 48 hours (yes two days!), some Valium can still be in your system for up to 100 hours. Take a look at the list below of some very commonly used medications and what their half-life’s are:

Valium – 48 hour half life and up to 100 hour half life if elderly or renal disease
Xanax – 11 – 26 hours
Lipitor – 14 – 30 hours
Lasix – 2 hours
Plavix – 6 – 8 hours
Metoprolol – 3 – 4 hours
Prednisone 3 – 4 hours
Tylenol 2 – 4 hours
ASA – 15 – 20 minutes (but extended release can be 6 – 20 hours)
Levaquin 6 – 8 hours
Celebrex 7 – 13 hours
Synthroid – 6 – 7 days (144 – 168 hours)
Glipizide – 2 – 4 hours
Zoloft – 26 hours
Viagra – 4 hours

And, it is not just medications – for those medications which can interact with caffeine or grapefruit, look at those half-life’s:

Caffeine – 5 – 6 hours
Grapefruit – 12 hours, but can still be in your system 24 hours later

Bottom line – telling a patient to take medications at different times of the day will not solve or erase the Level 1 or Level 2 interaction.