Taylor Blackburn

Independent Study and Mentorship

Spiece 2A

Research Assessment

Date: March 16, 2017

Subject: Prescription Drug Side Effects

MLA Citations:

Freeman, Shauna. "Top 10 Weirdest Prescription Drug Side Effects" 19 August 2008.

HowStuffWorks- Health. 16 March 2017.

Assessment:

To begin with, I already have a general knowledge of side effects from taking

medications prescribed by my doctor when I was sick, not necessarily from my study this year in

ISM, but experience with taking prescriptions and experiencing the most common effects to

people, such as drowsiness and dizziness. So, instead of delving into information about generic

side effects, I wanted to look into atypical ones that would spark my curiosity as to how these

extreme effects were overlooked during production and when the FDA had checked these

medications before being released into the public.

I overlooked to study this topic until now, just as many patients also overlook the

possible side effects to their medications. This is important as every person is different both

socially and genetically, so certain drugs created by pharmaceutical companies can affect people

either in extreme manner or the side effect can not even be seen by the patient. A few of the

drugs mentioned include Mirapex, Statins, Lipitor, Allegra, Vasotec, Lariam, Viagra, and; these drugs are still on the market because either the extreme side effects are unlikely to occur or their benefits outweigh their detriments, in my opinion. Everyone is a different person, so it will depend on the pain tolerance level of a person to decide what they can and can not handle based on the possible results of their medication and what they consider to be "too much." This ties into myself personally as the battle between what is considered a major or minor side effect is to be debated on and can apply to any topic within the pharmaceutical world.

From reading this article, I want to further investigate some themes like how some of these side effects connect with the intended purpose of the drug. I want to understand the science behind this of how neurons connect different bodily functions, for example: how would raising cholesterol tie into muscle aches and pains. Also, I question the long-lasting impact of these extreme side effects, as I know that this list of side effects are short-lived. It would be interesting to further delve into how a prescriptions have the ability to cause a complete loss of a sense or paralysis and how it would go without serious question by those that create it.

This has been beneficial to my study for the purposes of ISM as I was able to drift away from my current topic of drug abuse as it has been an integral part to my original work and final work. As technology continues to improve as the medical market diversifies and brings in new products, it is important that the effects that typically come along with taking a new prescription is regulated as to not affect a person in such extreme ways as it did in this article. I hope to take both the factual and deeper meaning into my next research assessments and carry this ideology out with me as I transition into college and later into a job related to pharmacy.

Top 10 Weirdest Prescription Drug Side Effects

BY SHANNA FREEMAN

Most of us take prescription drugs -- drugs that, by law, must be prescribed by a doctor -- at some point in our lives. If all goes well, the drug works for you as it's supposed to. But there's no "magic bullet," or drug that works the same for everyone without any risks or side effects. A side effect is basically an unintended occurrence that results from taking a drug. Side effects can be good or bad, depending on how you use the drug. For example, antihistamines, used to help with allergy symptoms like itchy eyes and sneezing, have the side effect of making you feel very sleepy. If you're having trouble sleeping, this side effect is great. If you need to deal with your allergies as well as drive your car or function at your job, however, it's bad.

When you pick up a prescription at a pharmacy, you get a list of common side effects. Regardless of the drug, the most common side effects are nausea and vomiting, allergic reactions, drowsiness, insomnia, heart problems (such as heart palpitations) and dependence. Often, there's something that you can do to help lessen the possibility of unwanted side effects. Some medications can make you feel nauseated if you take them on an empty stomach, for example, so it's a pretty simple fix to eat something.

There are some prescription drugs, though, that can cause side effects that are wildly different from those listed above. In some cases, the side effects were discovered during FDA trials and were deemed acceptable risks. In others, the side effects turned out to be catastrophic but weren't well-known until after the drug was widely used. Let's start off with a weird side effect that falls under the former category -- you may (or may not) remember it.

Amnesia is a condition right out of movies and soap operas; a character suddenly appears somewhere with absolutely no memory of who he is or where he came from. Sometimes it's caused by a head injury (and another knock on the head miraculously brings all of the memories back) while other times, it's caused by a traumatic event. In real life, some prescription drugs can also cause amnesia, although total amnesia is incredibly rare.

This is the case for some users of Mirapex (generic name pramipexole). Mirapex was developed in 1997 to control the symptoms of Parkinson's disease and is also prescribed for people with Restless Leg Syndrome(RLS). You'll see it several more times in our top 10 due to the wide range of weird side effects that its users can experience. One of these weird side effects is amnesia. Some patients reported short-term memory loss, such as not remembering what they did the day before. Going off Mirapex seemed to get rid of the problem.

This side effect can also happen with patients who take statins, a class of drugs that are supposed to lower cholesterol. Duane Graveline, a former astronaut, reported coming back from a short walk and not recognizing his wife while he was taking Lipitor. Then he lost memories of any events beyond his high school graduation. Thankfully, the memory loss was only temporary [source: Westphal]. Some researchers theorize that the statins may work almost too well, blocking the creation of cholesterol necessary for neurological function. However, they still

believe that the benefits of statins like Lipitor outweigh the risk of this rather scary side effect [source: Westphal].

There are many prescription drugs to help with different types of bodily aches and pains, but some drugs that have nothing to do with pain relief can actually cause pain instead. Then you have to take something to combat the pain -- and that's how people can end up on multiple drugs for multiple conditions. People who take the antihistamine Allegra (generic name fexofenadine) are trying to get rid of their hay fever and other allergic symptoms like sneezing, coughing and itching eyes. They may end up with muscle pain and backaches, however.

Patients who take Lipitor (generic name atorvastatin) can experience pain and stiffness as well as weakness in their muscles. In 2004, some patients began reporting that their weakness and pain was severe, and they were also experiencing loss of muscle control and coordination. Going off Lipitor seemed to alleviate these symptoms [source: Smith]. Lipitor's maker, Pfizer, cautions patients experiencing pain and weakness to alert their doctor, especially if they're already not feeling well. Some patients have filed lawsuits, claiming that the drug caused permanent muscle and nerve damage [source: Smith].

Have you ever swallowed a pill and been left with a nasty taste in your mouth, especially if you didn't drink water immediately afterward? Unless they're meant to be chewed or dissolved, most pills don't taste all that great. But some pills don't just leave a bad taste -- they can completely distort your sense of taste. And taste isn't the only sense that can be affected by pill side effects.

Vasotec (generic name enalapril) is a drug designed to treat high blood pressure and congestive heart failure. However, it can affect almost all of your five senses. Vasotec can cause you to lose your sense of smell (a condition known as anosmia) and taste, as well as have ringing in your ears (tinnitus) and eye problems like blurred vision and dry eyes. All of these are referred to as minor side effects, but if you were experiencing them all at once, you might consider them major.

An unrelated drug, Viagra (generic name sildenafil citrate), can also cause strange things to happen to your vision. Viagra is used to treat erectile dysfunction. Patients taking it have reported experiencing not only blurred vision, but also blue vision and problems distinguishing between the colors blue and green. In 2005, researchers at the University of Minnesota theorized that Viagra users can experience permanent vision loss due to blood flow to the optic nerve being cut off, known as nonarteritic ischemic optic neuropathy (NAION) [source: Medical News Today].

Rainbow urination might sound kind of cool. But in some cases, if your urine is any color other than clear, yellow or yellowish-orange, you could have something seriously wrong with you. Very dark orange, reddish or brown urine, for example, probably has blood in it and could indicate an infection. Some prescription drugs, though, can turn your urine different colors just by virtue of passing through your system. Red urine can also be caused by taking drugs such as phenazopyridine, used to treat urinary tract infection pain, or deferoxamine, used to treat iron poisoning.

Here are some other potential urine colors and some of the drugs that can cause them:

- Black can result from taking Flagyl (generic name metronidazole), furazolidone and several other antibiotics. Aldomet (generic name methyldopa), used to treat high blood pressure in pregnant women, can make urine appear to be black because it darkens upon contact with bleach -- often used to clean toilet bowls.
- Purple can be a side effect of taking phenolphthalein, used for a long time as a laxative but falling out of favor due to concerns that it may cause cancer [source: Melville].
- Green can result from taking Elavil (generic name amitriptyline hydrochloride), an antidepressant also used to treat bed-wetting in children, or Robaxin (generic name methocarbamol), a muscle relaxant used to treat muscle spasms.
- Blue can be a side effect of taking Dyrenium (generic name tariamterene), a
 diuretic, or methylene blue, a chemical compound used in medications like
 Urised to help reduce irritation caused by bladder infections.

You might expect to see or hear something that isn't actually there if you were taking an illegal drug like LSD or even a heavy painkiller like morphine. However, some of the most unlikely prescription drugs have "may cause visual and auditory hallucinations" as one of their side effects, and it's probably not the ones that you'd expect.

Mirapex, along with its many other potential side effects, can also cause hallucinations. Parkinson's disease patients have reported seeing everything from snakes crawling the walls to people hiding in their closets [source: Bartfai and Lees]. Though it's frightening and disturbing to have these hallucinations, reducing or even ceasing the medication often leads to the return of their tremors and other impairments.

Lariam (generic name mefloquine) was invented by researchers at the Walter Reed Army Institute of Research to prevent and treat outbreaks of malaria in the U.S. Army. Until recently, it was given routinely to soldiers deployed overseas as well as many tourists. Lariam carries some serious side effects -- one of them being hallucinations. Both soldiers and tourists have reported experiencing frightening hallucinations as well as violent psychotic behavior soon after taking the drug [source: CBS News]. Since the early 2000s, the FDA has required that patients be screened for a history of depression and psychosis before taking Lariam.

We all have weird dreams at times, right? Some prescription drugs give patients disturbing dreams every time they go to sleep, and others can actually cause users to sleepwalk and behave violently while asleep. One of the lesser side effects of Chantix (generic name varenicline), a prescription drug designed to help people stop smoking, is nightmares and night terrors. Night terrors aren't just scary dreams; people who experience them are struck by fear and partially awaken out of sleep, sometimes screaming or moaning. They don't usually wake up completely, and they don't always remember that the incident even happened.

Some drugs with this side effect are directly related to sleeping; that is, they're designed to help people with chronic insomnia. Lunesta (generic name eszopiclone) is a hypnotic drug --

meaning, it induces sleep -- prescribed for sleeplessness with directions to take on an "as needed" basis. But its users, as well as those of Ambien (generic name zolpidem), have also reported night terrors and nightmares. Both Lunesta and Ambien patients, though, have experienced an even weirder effect: performing activities in their sleep.

These activities include not only sleepwalking, but eating, making phone calls, having sex and driving -- yes, driving. Patients taking these sleep aids have woken up while backing their cars out of driveways or while shopping at all-night grocery stores. Some "Ambien drivers" have been arrested for driving while impaired and causing accidents [source: CBC News]. Both drugs' makers include warnings about these side effects and emphasize that they shouldn't be taken with alcohol (which can exacerbate the effect).

Weight loss: it can be an embarrassing subject. But is it more embarrassing than fecal incontinence? Many people would do just about anything to shed their excess weight, and it shows. All of the products sold that claim to assist in weight loss add up to a billion-dollar industry. This includes prescription drugs designed to help during dieting. One of those prescription drugs has a particularly nasty side effect.

Xenical (generic name orlistat, now sold over the counter in a lower dosage as Alli) is designed to prevent the body from absorbing fat and therefore decrease the actual calorie intake of its users. During Xenical's clinical trial, researchers found that up to 30 percent of ingested fat was excreted unabsorbed by subjects [source: Xenical]. Patients must follow a low-fat diet of around 15 grams of fat per meal. If they don't, there can be disastrous results. According to Roche Laboratories, side effects of Xenical include "gas with oily discharge, an increased number of bowel movements, an urgent need to have them, and an inability to control them, particularly after meals containing higher amounts of fat than are recommended" [source: Xenical].

Alli came on the market in 2007, and although it's a lower dosage of orlistat than Xenical -- 60 mg instead of 120 mg -- it still has the same side effects (which Roche calls "treatment effects"). Roche's Alli Web site states that "it's probably a smart idea to wear dark pants, and bring a change of clothes with you to work" when you first begin taking Alli [source: Alli Web site]. Alli was initially very popular with dieters. Sales have declined sharply, however -- quite possibly due to this rather weird and gross side effect.

Not all drug side effects are physical; some drugs can cause people to radically change their behaviors. Many patients taking Mirapex started noticing behavioral problems that they'd never experienced before. People who had only been occasional drinkers started drinking heavily, becoming alcoholics. Others who had never been interested in gambling found themselves at their nearest casino multiple times in one week, or sitting for hours in front of gambling Web sites. Some people became shopaholics, going thousands of dollars into debt because they couldn't control their spending habits. Others became hypersexual or constantly binged on food [source: Collins]. In short, Mirapex can lead to compulsive behaviors in some patients.

Mirapex works by increasing the production of dopamine in the brain, which helps the basal ganglia regulate movement of the body. Parkinson's disease is usually diagnosed in people 50

and older, and these people naturally have lower levels of dopamine. Mirapex binds to some of the dopamine receptors in the brain that also involve behavior, reward and moods.

Since 2005, Mirapex prescriptions have come with warnings about these potential side effects. Some claim this was a case of "too little, too late," and several lawsuits are in the works. In August 2008, a man who claimed that Mirapex caused his gambling addiction won an \$8.2 million lawsuit against its makers, Pfizer and Boehringer Ingelheim [source: News Inferno].

In addition to causing hallucinations, Lariam has been blamed for the suicides of some soldiers and has also been named as the reason behind the murders of several soldiers' wives [source: CBS News]. It hasn't been officially established that Lariam can lead to paranoia and suicidal ideation (the medical term for suicidal thoughts) in patients. However, its manufacturer, Roche Pharmaceuticals, added, "Some patients taking Lariam think about killing themselves, and there have been rare reports of suicides" to its list of potential side effects. In 2005, the Army stopped routinely distributing Lariam to its overseas troops [source: MSNBC].

Lariam is not a drug that one would routinely associate with mental instability, but Paxil (generic name paroxetine) is. Paxil is an antidepressant, used to treat everything from depression to post-traumatic stress disorder. But many patients have reported suicidal ideation while taking Paxil. In 2003, the FDA advised that children and adolescents under the age of 18 shouldn't be prescribed Paxil to treat major depression, due to this potential risk [source: FDA]. The advisement was later expanded to include adults up to age 30 [source: FDA]. There are currently numerous lawsuits alleging Paxil's role in suicides and suicide attempts (as well as the severe withdrawal symptoms that some patients have experienced). Documents in one of these lawsuits revealed that Paxil's maker, GlaxoSmithKline, may have hid data demonstrating the link between the drug and increased thoughts of suicide [source: BBC News].

Chantix can also lead to suicidal ideation. In February 2008, the FDA issued a warning which included not only the possibility of suicidal thoughts but actual suicide. It reports that at least 40 suicides and 400 attempted suicides have been linked to the drug [source: Sauer and Walter].

When a woman becomes pregnant, her doctor usually gives her a huge list of do's and don'ts. She should stay away from certain medications, for example, because they can cause problems during pregnancy. There are several prescription drugs that work very well at resolving the condition they were prescribed for, except that they're teratogenic. That means that they can interfere with fetal development and lead to birth defects.

Thalidomide is one of the most infamous teratogenic drugs. First synthesized in Germany in the 1950s, this drug was prescribed as a sleeping aid and anti-nausea pill to thousands of pregnant women in nearly 50 countries (although it hadn't been approved in the United States). Unfortunately, it was never proven to be safe for pregnant women. Between 1956 and 1962, nearly 10,000 women who took Thalidomide gave birth to babies with phocomelia [source: Bartfai and Lees]. Often referred to as "flipper babies," these children were born with extremely short or missing limbs.

Thalidomide was taken off the market and drug testing and approval practices across the world were tightened. Surviving victims of Thalidomide, whose families received compensation from the drug's manufacturer, Grunenthal, are currently seeking additional compensation from both Grunenthal and the German government [source: Reuters]. Thalidomide has recently returned, with strict controls, for treatment of a certain type of leprosy lesion as well as multiple myeloma, a type of cancer [source: Speige].

Accutane is a drug used to treat severe acne that can also cause phocomelia. Because of this, women who are prescribed the drug must commit to following a strict regimen so that they don't become pregnant while taking it. This includes certifying that they will use two methods of birth control (and have an emergency backup) and also have their blood drawn monthly to test for pregnancy before receiving a prescription refill. They also agree not to donate blood so they don't pass the drug on to other women.

Ultimately, all drugs have some side effects, and most of them aren't as weird as the ones we've discussed here. Always read the side effect information that comes with your prescription drugs and discuss them with your doctor.