



*Solving the problem of drug disposal where it starts –  
in your home medicine cabinet.*

December 2017



# *INTRODUCTION*

We, as a society, are not educated about the risks of keeping unused medication in our homes. Any unused and expired medications are a significant source of safety and environmental problems. Improper disposal of such medications has significantly contributed to the opioid epidemic, accidental poisonings, drug overdoses and the pollution of our nation's drinking water.

**THIS EPIDEMIC IS A NATIONAL EMERGENCY.** We must be aware of how to educate others so that everyone can actively participate and be a part of the solution to stop the addiction cycle.

Untangling old behaviors about medication management is a critical piece in solving the opioid crisis. The solution has to include not only a convenient, effective means to dispose of unused, expired medication but continual education as to its importance, thus making cleaning out the medicine cabinet a routine, “second nature” behavior.

# *DisposeRx*

DisposeRx has developed an in home disposal solution for unused, unwanted, expired and/or off therapy prescription medications and other pharmaceuticals. DisposeRx stops the route to addiction and death that begins with leftover opioids in the medicine cabinet. Our solution offers an effective, convenient and inexpensive method for permanent drug disposal that does not enable removal for illicit use, and prevents drug pollution of landfills and water supplies.

DisposeRx is the safe, convenient and inexpensive solution that will permanently remove drugs from our medicine cabinets. When used by patients, DisposeRx creates a safer home, prevents addiction and deaths and promotes a healthier environment.

# TRAINING OBJECTIVES

1. Learn the impact that leftover medication in homes has on the opioid crisis and addiction.
2. Learn why proper pharmaceutical disposal is essential to prevent access and pollution.
3. Understand how DisposeRx is a critical part of the solution of proper drug disposal.
4. Learn and understand how DisposeRx works.
5. Learn how to instruct others on the use of DisposeRx.

# Do you remember the last time you or a family member were prescribed an opioid for pain and did not finish the prescription?

- Prescription drugs have changed American healthcare.
- Almost all Americans use at least one prescription drug, and more than 10 % use five or more.
- There are over 200 million opioid prescriptions written each year.
- Each day, over 1000 people are treated in emergency rooms for opioid-related problems.
- 92% of patients do not finish their painkiller prescriptions.
- Less than 10% of those dispose of their leftover medication properly.
- Most patients have more than 10 pills left in the prescription vial.





# THE OPIOID EPIDEMIC

- Drug overdoses in 2016 killed more than 64,000 Americans, with the largest numbers coming from people who abuse prescription opioids such as oxycodone or hydrocodone
- More than 2,000 teenagers will misuse a prescription drug for the first time today
- Many of these encounters begin with opioids that have been leftover in their own homes, resulting in addiction and dependency
- Heroin is less expensive, more available and is involved in most of the the opioid related deaths
- Studies have shown that *two in three people who currently use heroin started out by using prescription pain medication for non-medical purposes*



# WHY DisposeRx<sup>TM</sup>

# DisposeRx™

- DisposeRx is committed to the safer home by offering communities a convenient way to dispose of prescription drugs preventing the cycle of addiction, overdose and death.
- DisposeRx is committed to stopping the cycle of drug addiction, overdose and death by offering a safe and simple way to dispose of leftover and expired prescription drugs.
- We provide a convenient way to dispose of your unused and expired medications with an in-home drug disposal system that safely removes drugs, creating a safer home environment while preventing pollution of groundwater.
- DisposeRx is made from generally recognized as safe, non-toxic components that rapidly polymerize into a biodegradable gel when mixed in the prescription vial with drugs and water.



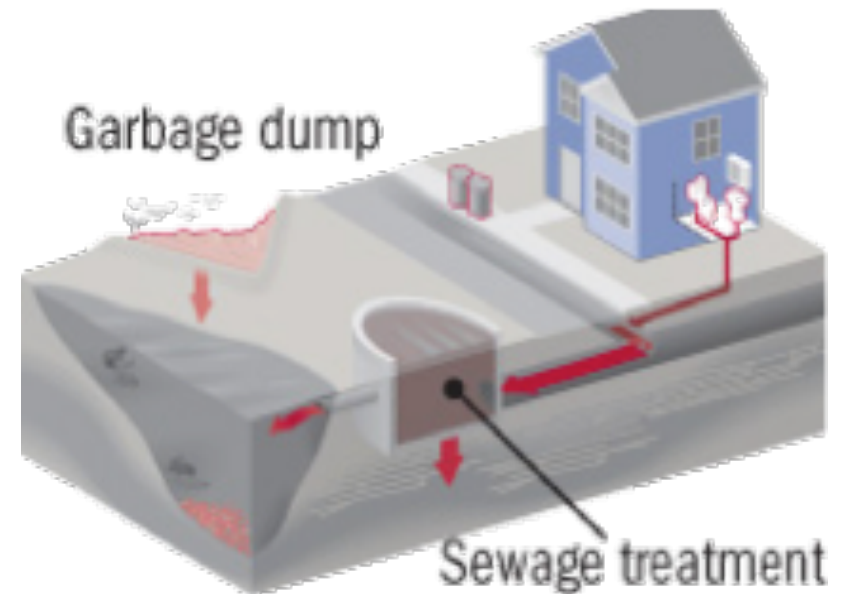




- Pollution from leftover drugs affects the entire environment, including fish and people.
- Leftover and unused prescription drugs, when discarded improperly in the trash, pollute our ground drinking water.
- DisposeRx encourages new habits as an alternative to putting drugs in the trash, flushing them in the toilet or returning them to pharmacies. These habits MUST start with the life cycle of medication management, from dispensing to compliance to disposal.

# DisposeRx™

DisposeRx offers a solution that builds social awareness around sustaining behavioral changes of medication education to promote safe and scalable medication disposal habits. Our mission is to connect all stakeholders (providers, pharmacists, patients, payers, landfill providers, water supply systems and both state and federal lawmakers) as partners in preventing medication residue from contaminating our ecosystem.



# How does DisposeRx work?

- When combined with water in the original prescription bottle and shaken, DisposeRx sequesters the drugs (i.e. pills, capsules, caplets, liquids or tablets) in a semi-solid gel.
- The drugs cannot be retrieved from the resulting gel material for abuse or leach into landfills.
- The biodegradable solid material in the prescription bottle can be thrown away as it is safe for the environment.



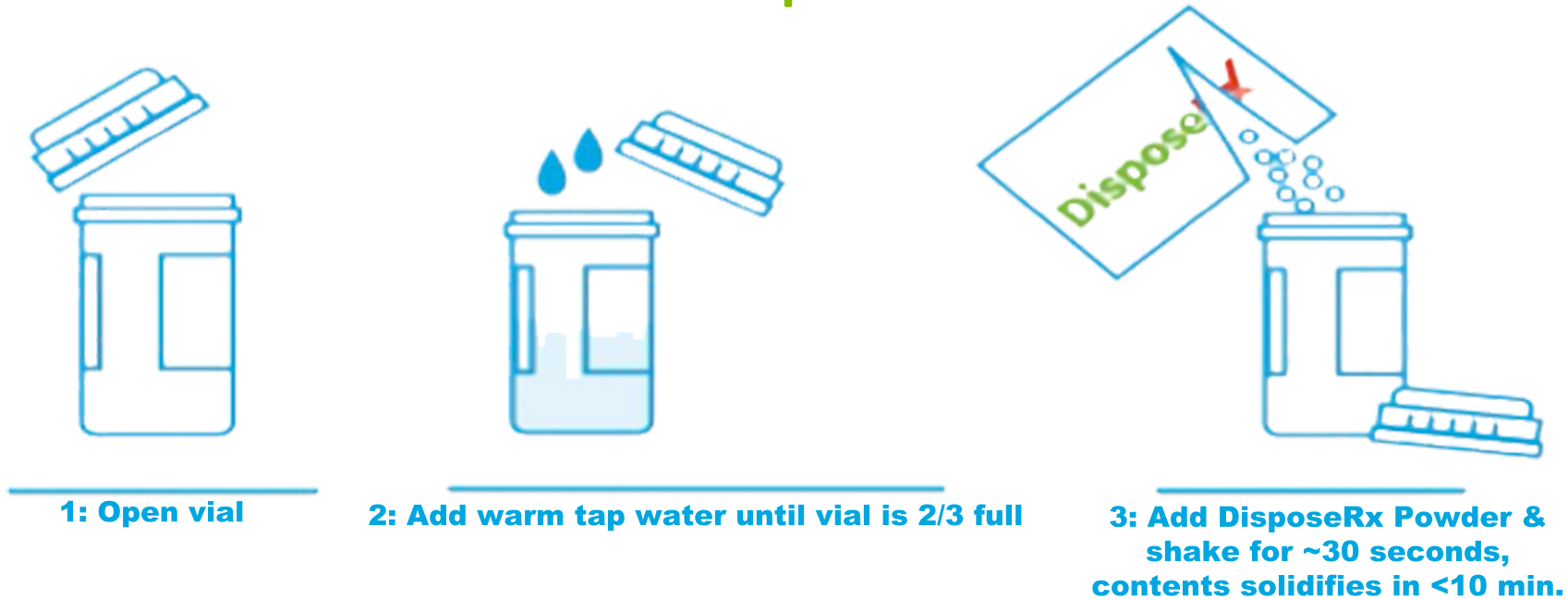
Drugs sequestered in  
DisposeRx biodegradable  
material

# How easy is it to use DisposeRx?

- STEP 1** Remove the child resistant cap of the original prescription bottle and confirm the prescription vial is no more than 1/3 full of pills, capsules or tablets (this will ensure maximum destruction)
- STEP 2** Add water until the prescription vial is 2/3's full.
- STEP 3** Simply add the DisposeRx powder, secure the child resistant cap and shake for 30 seconds in order to activate the gel
- STEP 4** Discard in the household waste.

[To view a video demonstration click here](#)

# The Solution: DisposeRx™



- Pills + DisposeRx + Water = 100% effectiveness
- Proprietary, patented technology made of solidifying cross-linking chemical polymers to sequester medications
- All materials used in DisposeRx are safe and listed in the FDA's Inactive Ingredient Database. DisposeRx cross-linking polymers are found in foods, oral drug products, are safe to ingest if accidentally exposed, and environmentally-friendly.

**Video Link:** <https://youtu.be/Cgxcqhwd7wY>



# PRECEDENCE

When orange flavored aspirin were introduced in the 1950's by St. Josephs, children liked the candy flavor and would consume an entire bottle of aspirin. Unfortunately, this caused the deaths of thousands of children over the ensuing years from excessive bleeding, a complication of aspirin products. In 1970, the Poisoning Prevention Packaging Act mandated that all drugs be dispensed with a child resistant closure.

Within two years, there was a 45% reduction of children's deaths from drugs in the medicine cabinet. DisposeRx is working with state and federal legislatures to require that the dispensing of scheduled drugs such as opioids is accompanied by a means by which to dispose of them in the prescription vial in which they are dispensed by the pharmacist.

# CONCLUSION

The importance of proper medication disposal, through a safe, site-of-use, non-toxic and environmentally cost effective solution is what DisposeRx believes to be a cornerstone of proper medication management.

At DisposeRx we believe solutions must be educational and proactive, based on patient adherence to positive habit forming prescription drug disposal. We believe that by educating consumers on the importance of prescription drug dispensing, medication compliance and safe medication disposal, we can bring positive change to the way in which all patients manage and dispense of prescription medication.

The mission of DisposeRx is to ensure public safety and prevent environmental pollution.

# Thank you



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# FAQs

## 1. What is an opioid?

Opioids are a class of drugs for the treatment of moderate to severe pain that are available legally by prescription, including oxycodone (OxyContin), hydrocodone (Vicodin), codeine, morphine, synthetic opioids such as fentanyl and many others. Opioids also include the illegal drug heroin. These drugs are chemically related and interact with opioid receptors on nerve cells in the body and brain to relieve acute and chronic pain. In addition to pain relief, opioids result in euphoric effects that promote addiction. Opioid overdoses can result in death by actions in the brain to shut down the body's respiratory system.

## 2. Will DisposeRx work on all medications/drugs?

DisposeRx works on all medications and all forms of drugs, to include pills, tablets, capsules, and liquids. A primary target of DisposeRx is to get rid of leftover opioids and drugs that can be abused (scheduled), but secondary targets for DisposeRx treatment include antibiotics, chemotherapies, stimulants, antidepressants and many others.

### **3. Why should I get rid of my leftover medication?**

Drugs left over in the medicine cabinet are a primary cause of addiction and death and a leading reason for visits to emergency rooms. Seventy percent of opioid addictions begin with painkillers left in medicine cabinets after surgeries or for treating cancer pain. These addictions to prescription opioids become too expensive and difficult to manage, resulting in the use of heroin to manage addictions. Over 65,000 people in the US died in 2016 from drug overdoses, more than during the Vietnam war and more than all traffic accidents. Leftover medications destroy lives and kill people.

### **4. How does DisposeRx work when added to my medication?**

Our non-toxic, cross-linking polymers that, when added to the prescription vial with water and shaken, permanently sequester unused, unwanted and/or expired Rx medications in a safe, viscous biodegradable gel that can simply be discarded in the household waste. Once treated, drugs cannot be extracted for abuse or pollute landfills since the sequestered drugs and the gel matrix rapidly biodegrade.



## **5. What happens if I don't add enough water or I add too much?**

For a standard amber vial in which most medicines are dispensed by the pharmacist, we recommend adding enough water to fill the vial and pills about two-thirds full. This is sufficient to dissolve pills, capsules, tablets, etc. when one packet of DisposeRx (2g) is added and shaken for about 20 seconds. If too little water is added, the gel becomes solid more quickly, and if more water is added (e.g. over 2/3 full), the gel takes longer to solidify. DisposeRx works well in either circumstance.

## **6. Is DisposeRx toxic? What happens if I eat DisposeRx gel after I have used it with my medication?**

DisposeRx is not toxic and is made of components described by the Food and Drug Administration (FDA) as “generally recognized as safe” (GRAS) or “non-toxic”, and the ingredients are often used in foods. Either as a powder before use, or a gel after mixed with water, studies have shown that DisposeRx is inert and will safely pass through the digestive system. These studies have further shown that drugs treated with DisposeRx are both physically and chemically sequestered and cannot be extracted for abuse or pollute landfills and water supplies. If the drug/DisposeRx gel containing drugs is eaten, they will safely pass through the body without releasing their contents.

## **7. Can I use this for my pet's leftover medication?**

DisposeRx is suitable for both human and veterinary use, and will completely sequester leftover medications used for large or small animals in a viscous gel from which they cannot be extracted.

## **8. What if I have additional unused medication at home and need more packs. Where do I get them?**

DisposeRx is working with major pharmacy chains, drug manufacturers, hospitals, hospices and pharmacies to make our product available to customers at the time of drug dispensing at the pharmacy. Additional packets can be taken home for disposing of drugs that remain in medicine cabinets.

## **9. Why can't I just flush my medication as is recommended by some?**

The FDA recommends flushing leftover drugs, the Drug Enforcement Agency (DEA) recommends driving to drugstores or law enforcement facilities to return drugs and the Environmental Protection Agency (EPA) is strongly against polluting landfills and water supplies by flushing drugs or throwing them into the trash without treatment. Surprisingly, none of these agencies has regulatory control of drug disposal. Pollution of the water supplies from flushed drugs or those that leach from landfills disrupts ecosystems (e.g. fish) and ultimately people. Clearly this is not a viable way to get rid of leftover drugs.

## **10. Are there any drugs for which I cannot use DisposeRx?**

DisposeRx safely and permanently sequesters all drugs, both physically and chemically, so they cannot be diverted for abuse or pollute. Drugs include opioids, stimulants, antidepressants, antibiotics, muscle relaxants, chemotherapies and others, and they may be in any form: tablets, capsules, pills, liquids or patches.

### **11. Can drugs be taken out of DisposeRx gel and abused?**

Once drugs are sequestered in DisposeRx, studies have shown that they cannot be extracted for abuse using solvents commonly available to “at home” scientists. If the purpose of the home abuser is to extract a useable amount of drugs from DisposeRx gels, this is not possible.

### **12. Is using DisposeRx safer than incineration?**

Incineration is one method of destroying drugs, but DEA regulations for bringing drugs to incinerators has required accompaniment by two law enforcement agents. These restrictions have been modified recently, but incineration is known to pollute air and water, and drugs are diverted for abuse in the process. DisposeRx-treated drugs are safer, less likely to be diverted and do not pollute landfills or water supplies.

### **13. If I don't use DisposeRx immediately, will it expire?'**

No, DisposeRx is packaged to prevent degradation over time.

## **How is DisposeRx superior to other disposal products on the market?**

The FDA says flush drugs, the DEA says take them back to pharmacies or the police, and the EPA says don't even think about flushing drugs. The FDA also recommends the use of coffee grounds or mixing with kitty litter. Neither of these approaches sequester drugs nor prevent their abuse and pollution. Other approaches include the use of charcoal to adsorb drugs when mixed with water, however compared to DisposeRx, these products are not permanent, require time to be partially effective and are expensive.

## **Where can I purchase DisposeRx?**

DisposeRx is provided without charge by pharmacies with prescriptions. If additional DisposeRx is required for drugs already in home medicine cabinets, additional packets of DisposeRx can be obtained at your pharmacy.

## **How do I reach DisposeRx to learn more about proper drug disposal?**

DisposeRx can be reached by phone at 844-456-1600 or you can visit our website <http://www.disposerx.com> for additional information. We can also be reached by mail at DisposeRx, Inc., 135 West Illinois Ave., Suite 1, Southern Pines, NC 28387.

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