

# **New Governmental Alert and Regulation Warning! Splitting and Crushing Tablets May be Harmful to Your Health**

The Occupational Safety and Health Administration (OSHA) requires employers to inform employees how to identify the hazardous materials they may encounter in the workplace. However, many drugs are considered hazardous materials. If an employee is filling a pillbox, splitting/crushing tablets, or in any way coming in contact with medications, employers are required to make them aware of which medications are potentially hazardous and how to handle them. The Department of Health and Human Services (HHS), along with the Centers for Disease Control and Prevention (CDC) and the National Institute for Occupational Safety and Health (NIOSH), have compiled a list of medications that are considered to be hazardous: <https://www.cdc.gov/niosh/docs/2016-161/pdfs/2016-161.pdf>.

Pharmacists, pharmacy technicians, nurses, nurse's aides, and med techs come into contact with many of these drugs multiple times a day.

What makes a drug hazardous? In 1990, the American Society of Health-System Pharmacists (ASHP) defined a hazardous drug as a drug that exhibits one or more of the following characteristics in either humans or animals:

1. Carcinogenic
2. Teratogenic or developmental toxicity
3. Reproductive toxicity
4. Organ toxicity at low doses
5. Genotoxicity
6. Structure/toxicity profile of new drug similar to drug already on the list

Along with the list of hazardous drugs, recommended procedures have been published for performing a variety of workplace activities. For example, when administering unbroken, coated tablets or capsules, no precautions are needed. However, when splitting or crushing tablets, the NIOSH recommends wearing double gloves, protective gowns, and respiratory protection. See <https://www.cdc.gov/niosh/docs/2004-165/pdfs/2004-165.pdf>.

| Carcinogenic  | Teratogenic  | Reproductive Toxicity   |
|---|--|---|
| <p>Anastazole (Arimidex)<br/>                     Bicalutimide (Casodex)<br/>                     Exemastane (Aromasin)<br/>                     Flutamide (Eulexin)<br/>                     Hydroxyurea (Droxia)<br/>                     Letrozole (Femara)<br/>                     Megestrol (Megace)<br/>                     Methotrexate (Rheumatrex)<br/>                     Tamoxifen (Nolvadex)<br/>                     Temsirolimus (Torisel)</p> | <p>Azathioprine (Imuran)<br/>                     Carbamazepine (Tegretol)<br/>                     Cyclosporine (Neoral)<br/>                     Divalproex (Depakote)<br/>                     Estrogens<br/>                     Leflunomide (Arava)<br/>                     Oxcarbazepine (Trileptal)<br/>                     Phenytoin (Dilantin)<br/>                     Progesterones<br/>                     Rasagiline (Azilect)<br/>                     Spironolactone (Aldactone)</p> | <p>Clonazepam (Klonopin)<br/>                     Clobazam (Onfi)<br/>                     Colchicine (Colcrys)<br/>                     Dutasteride (Avodart)<br/>                     Finasteride (Proscar)<br/>                     Fluconazole (Diflucan)<br/>                     Paroxetine (Paxil)<br/>                     Temazepam (Restoril)<br/>                     Testosterones<br/>                     Topiramate (Topamax)<br/>                     Valproic Acid (Depakene)<br/>                     Warfarin (Coumadin)<br/>                     Ziprasidone (Geodon)</p> |

The takeaway is to be aware of what drugs you are handling and how to handle them appropriately while caring for patients.

<https://www.osha.gov/dsg/hazcom/standards.html>

NIOSH [2016]. NIOSH list of antineoplastic and other hazardous drugs in healthcare settings, 2016. By Connor TH, MacKenzie BA, DeBord DG, Trout DB, O’Callaghan JP. Cincinnati, OH: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication Number 2016-161 (Supersedes 2014-138).