

NH DEPARTMENT OF CORRECTIONS POLICY AND PROCEDURE DIRECTIVE	CHAPTER <u>Health Services</u> STATEMENT NUMBER <u>6.67</u>
SUBJECT: DRUG - NUTRIENT INTERACTIONS PROPONENT: <u>Helen Hanks, Administrative Director</u> <i>Name/Title</i> <u>Medical/Forensic Services 271-3707</u> <i>Office Phone #</i>	EFFECTIVE DATE <u>06/15/14</u> REVIEW DATE <u>06/15/15</u> SUPERSEDES PPD# <u>6.67</u> DATED <u>03/15/13</u>
ISSUING OFFICER: <hr/> <i>William Wrenn, Commissioner</i>	DIRECTOR'S INITIALS: _____ DATE: _____ APPENDIX ATTACHED: YES _____ NO _____
REFERENCE NO: See reference section on last page of PPD.	

- I. **PURPOSE:**
To provide education to patients/inmates on potential drug-nutrient interactions that can alter the effectiveness of a drug and cause harmful effects to the patient.
- II. **APPLICABILITY:**
To all pharmacy, dietary and healthcare employees
- III. **POLICY:**
It is the policy of the NH Department of Corrections (NHDOC) that the clinical pharmacist is responsible for disseminating information on potential drug-nutrient interactions to appropriate healthcare departmental employees.
- IV. **PROCEDURES:**
 - A. Pharmacy will identify medications with potential drug-nutrient interaction problems by utilizing the pharmacy computer. Pharmacy staff will notify the Chief Medical Officers of patients receiving targeted medications, which have a high risk for producing a drug-nutrient interaction on a case by case basis. "A Guide to Nutrient and Drug Interactions" (attachment 1) identifies the targeted medications. The dispensing pharmacist will immediately report drug-nutrient interactions that can cause potentially serious adverse events (ie. MAO inhibitors), to the prescribing providers and the nursing staff.
 - B. Nutritional Services
Diet modification will be substituted after determination of appropriateness by Nutritional Services. At the time of assessment, Nutritional Services will identify the targeted medication in the nutritional care plan. Concurrently, education will be provided on appropriate diet modifications to prevent adverse drug-nutrient interactions. Nutritional Services will also participate in the development of an

educational tool to teach patients/inmates how to avoid problems associated with drug-nutrient interactions. Nutritional Services will provide specialized counseling on the diet modifications for drug-nutrient interaction upon the written consult of the physician. Nutritional Services will consult with the Food Services on these specialized needs.

- C. Prescribing providers will educate the patients/inmates receiving the targeted medications with potential interaction prior to being discharged from the infirmary and appropriate documentation will be made. "A Guide to Nutrient and Drug Interactions" (see attachment 1) will be available and is to be used as the primary education tool. All patient/inmate education regarding drug-nutrient interactions will be documented in the patient's/inmate medical record.

REFERENCES:

Standards for the Administration of Correctional Agencies
Second Edition Standards

Standards for Adult Correctional Institutions
Fourth Edition Standards

Standards for Adult Community Residential Services
Fourth Edition Standards

Standards for Adult Probation and Parole Field Services
Third Edition Services

Other

HANKS/clr

Attachment



DEPARTMENT OF CORRECTIONS

Pharmacy Services

A GUIDE TO DRUG and NUTRIENT INTERACTIONS

1. ANTIBIOTICS

Ciprofloxacin (Cipro): do not take with dairy products or foods rich in calcium within one hour of taking the drug; coadministration decreases overall absorption. Avoid excessive caffeine intake - ciprofloxacin inhibits caffeine metabolism and high caffeine levels may result.

Erythromycin: *stearate* salt-take on an empty stomach if possible with a full glass of water. If not possible, may take with food.
Estate and ethylsuccinate forms-take with food.

Avoid citrus foods and juices with all forms of the drug.

Azithromycin (Zithromax): do not take dairy products or foods rich in calcium within one hour of this drug; each dose should be administered on an empty stomach, and with a full (Boz) glass of water.

Tetracycline (Sumycin, Achromycin): Take on an empty stomach. Do not take dairy products or foods rich in calcium one hour before or two hours after this drug. Avoid coadministration with foods rich in iron .

Penicillin VK: Take on an empty stomach one hour before or two hours after meals with a full glass of (Boz) of water. Avoid citrus foods and juices.

****NOTE**** - same applies for most penicillins, including dicloxacillin, ampicillin, etc.

Sulfa drugs: should be taken on an empty stomach with a full (Boz) glass of water. Examples of sulfa drugs include: bactrim, sulfadiazine, sulfisoxazole.

2 NSAID's (non-steroidal anti-inflammatory drugs)

These agents should be taken with food or milk; examples of these agents include ibuprofen, indomethacin, naproxen.

3. MAOI's (monoamine oxidase inhibitors) - should avoid foods that are high in tyramine content, Le., aged cheeses, bananas, caffeinated drinks, yogurt, alcoholic beverages (wine, sherry, beer, ale). Examples of MAOI's include: tranylcypromine (Parnate), and phenelzine (Nardil). Procarbazine (Matulane), primarily used to treat Hodgkin's Disease, is also a MAOI and patients should avoid foods with high tyramine content.

4. ANTIHYPERTENSIVES

Captopril (Capoten) - should be taken on an empty stomach. Avoid high potassium foods. Metoprolol (Lopressor) - should be taken with food.

Felodipine (Plendil) - avoid grapefruit juice, which interferes with felodipine metabolism, leading to a major increase in felodipine levels.

5. ANTIVIRALS

Didanosine (Videx, ddl) - should be taken on an empty stomach; should also avoid a high sodium intake as well as citrus juices, i.e., orange, grapefruit, and pineapple juices.

Zalcitabine (Hivid, ddC) - should be taken on an empty stomach.

Protease inhibitors:

Indinavir (Crixivan) - should be taken on an empty stomach, one hour before meals or two hours after meals with a full glass of water.

Saquinavir (Invirase) - should be taken within two hours after a meal to ensure adequate absorption.

Ritonavir (Norvir) - should be taken with food to prevent nausea and vomiting. Taking this drug with a large meal may prevent diarrhea.

6. ANTICONVULSANTS

Phenytoin (Dilantin) - administration with tube feedings may decrease absorption. Monitor phenytoin levels when changing enteral feeding regimen or timing phenytoin dose relative to feeding schedule. Oral phenytoin may be administered with food or milk to decrease stomach irritation.

Valproate sodium oral solution (Depakene Liquid) - do not take with carbonated beverages - may generate free valproic acid, resulting in mouth and throat irritation.

Gabapentin (Neurontin) should not be coadministered with antacids (Mylanta, etc) which may decrease absorption considerably.

7. MISCELLANEOUS

Steroids - should be taken with food or a snack to prevent gastrointestinal upset; examples include **prednisone, dexamethasone, etc.**

Cyclosporine (Sandimmune) - should be taken on an empty stomach; grapefruit juice should be avoided, because coadministration tends to increase cyclosporine blood levels.

Itraconazole (Sporanox) - should be taken on an empty stomach.

Alendronate (Fosamax) - should avoid dairy products or foods high in calcium one hour before or after its administration. Should be administered with **plain water only, 30 minutes** before the first food or drink of the day.

Oral anticoagulants (e.g., Coumadin) - avoid major changes in intake of foods rich in vitamin K (e.g., beef liver, green leafy vegetables, etc.)

Digoxin (Lanoxin) - should avoid foods that are high in bran fiber, antacids, and herbal teas; bran fiber can result in a substantial decrease in absorption of digoxin.