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# iCare Webcast



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# What Confuses Us About Over The Counter Medication

Carrie Allen PharmD, CGP, BCPS

iCare

mmLearn.org  
mm

# Topics

- Over The Counter medications (OTC), will have a tiny overlap in some cases with prescriptions (RX) medications
- Broad Overview – not enough time to go into all OTC
- Grapefruit juice
- Tapering, sunlight

Continued...

# Topics

*(continued)*

- Expired medications
- Dangers of some OTC
- Herbals...quick list
- Interactions with some drugs, with some diseases



# Over The Counter Medications

- Also called OTCs
- Medications that do not require a prescription and can be bought by going into a store and grabbing off the shelf

Continued...

# Over The Counter Medications

*(continued)*

- Some used to be prescription items  
(e.g. Prilosec -omeprazole)
- Slightly different than “behind the counter items”  
such as pseudoephedrine containing products

Continued...



# Over The Counter Medications

*(continued)*

- Can change or have different active ingredients with same brand name
  - » without much fanfare or warning, keep checking your labels.
  - » Kaopectate VS. Pepto Bismol
    - Kaolin + Pectin is now Bismuth subsalicylate.

Continued...

# Over The Counter Medications

*(continued)*

- Can change or have different active ingredients with same brand name
  - » Midol (some have diuretic, some do not)
  - » Migraine medications
    - some have caffeine, some do not
    - Some have caffeine, Tylenol (acetaminophen) AND Aspirin (ASA).



# What's the deal with grapefruit juice?

- Grapefruit has compounds that can interact with medications in the stomach & in high amounts, in the liver.
  - » flavonoids, furanocoumarins
  - » vary in amount in juice and different versions of the fruit
  - » Intestinal & liver enzyme known as CYP3A4
  - » P-glycoprotein in gut (inhibits the absorption and increases the excretion of drug)
  - » Organic anion transporting peptide (OATP) drug transporter (transports substances into cells).



Continued...

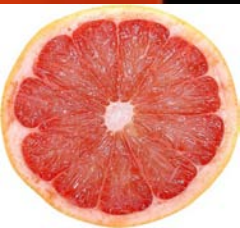
# What's the deal with grapefruit juice?

*(continued)*

Mostly with Prescription medications some OTC mention it

- » Allegra
- » levothyroxine
- » amiodarone
- » cyclosporine
- » dihydropyridine calcium channel blockers (e.g. felodipine)
- » diazepam, midazolam, triazolam,
- » saquinavir,
- » nisoldipine
- » lovastatin, simvastatin and atorvastatin

Continued...



# What's the deal with grapefruit juice?

*(continued)*

- Differences in levels versus differences in clinical response (e.g. BP)
- Significance of grapefruit juice – drug interaction differs with the person and with the drug
- Some drugs will say to separate by 2-4 hours (levothyroxine, Allegra = 4h), some will say to avoid it altogether (amiodarone, statins vary)



# Can I take a drug if it has expired... what will happen if I do?

- Manufacturer's expiration date specifies how long the full potency and safety of the drug is guaranteed,
  - » based on their stability & sterility data and testing
  - » impractical MFG to test items for really long periods of time.
- Depends on the medication
  - tetracycline, nitroglycerin, insulin, some breathing treatments, and liquid antibiotic suspensions
- Expired + suboptimal storage conditions can sometimes lead to changes in medications (usually weaker)



Continued...

# Can I take a drug if it has expired... what will happen if I do? *(continued)*

- Room temperature is a specific storage recommendations, refrigeration often not better.
- Refrigeration is used to preserve food (decrease mold and bacterial growth rate) not always better for medications.
  - » Refrigeration = moisture
  - » Bathroom = moisture
  - » Moisture = often the enemy of chemical stability, have to think of binders and inactive ingredients too.



# Tylenol (acetaminophen, APAP)

- FDA:

“Consumers are not sufficiently aware that acetaminophen can cause serious liver injury, and their perceptions may be influenced by the marketing of the products. “



Continue...



# Tylenol (acetaminophen, APAP) (continued)

## **Toxic dose may be lower in some cases**

- Not only about DOSE (liver issues, alcohol use, other medications)
- Dose, combinations of items may overwhelm a pathway in the liver



Continue...

# Tylenol (acetaminophen, APAP) (continued)

Current Liver warnings look similar to this:

This product contains acetaminophen. Severe liver damage may occur if you take:

- » more than 8 (500mg caplets) in 24 hours, which is the maximum daily amount (12 of 325 mg tablets)...this is likely being reduced
- » with other drugs containing acetaminophen
- » 3 or more alcoholic drinks every day while using this product

# McNeil brand name Tylenol

- Fall 2011: McNeil informed FDA of new dosing instructions will appear on Extra Strength **TYLENOL®** (500 mg/tablet) product packages in the U.S. beginning in the fall of 2011. Maximum dose will be 3000 mg/24 hours



Continue...

# McNeil brand name Tylenol (continued)

- 2012: McNeil will also be lowering the maximum daily dose for Regular Strength TYLENOL® (325 mg/tablet) and other adult acetaminophen-containing products beginning in 2012. Maximum dose will be 3000 mg/24 hours



Continue...

# McNeil brand name Tylenol (continued)

- “Consumers can continue to use their TYLENOL® and other adult acetaminophen-containing products as currently labeled. The company is working closely with other manufacturers of acetaminophen products to help ensure consistency in dosing instructions. “



Continue...

# McNeil brand name Tylenol

*(continued)*

- TYLENOL® website has been enhanced to include interactive tools to help consumers identify products that contain acetaminophen  
[www.tylenol.com/getreliefresponsibly](http://www.tylenol.com/getreliefresponsibly)
- Common products = TYLENOL®, SUDAFED® Triple Action™, NyQuil®, Percocet® and Vicodin®

Continue...

# McNeil brand name Tylenol

*(continued)*

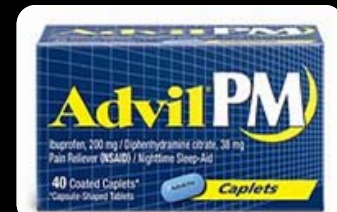
- The McNeil website has an option to enter the name of a medicine you are taking and it will tell you if it contains acetaminophen.



# Why shouldn't seniors take Advil PM or Tylenol PM when they can't sleep?

Antihistamines have side effects - basically how most people feel on Benadryl ...which is what is in most OTC sleep aids.

- OTC sleep aids
  - » Unisom, Tylenol PM, Sominex, Nytol = diphenhydramine or doxylamine...and some have Tylenol (acetaminophen) or Motrin (ibuprofen)



Continue...



# Why shouldn't seniors take Advil PM or Tylenol PM when they can't sleep? *(continued)*

What does diphenhydramine or doxylamine do?

- Blocks the effects of histamine, a naturally occurring neurotransmitter, and helps you doze off.
  - dry mouth
  - dry eyes/ blurry vision
  - unclear thinking
  - slow moving
  - urinary retention (can lead to UTIs)
  - constipation
  - slow moving

Continue...

# Why shouldn't seniors take Advil PM or Tylenol PM when they can't sleep? *(continued)*

- Has acetaminophen or ibuprofen in it, don't take extra medication unless you need it for pain
- Increased fall risk, once in a while seems safe but may not be...balance with need for sleep
- Driving, hangover effect, increased fall risk memory, confusion and cognition problems

Continue...

# Why shouldn't seniors take Advil PM or Tylenol PM when they can't sleep? *(continued)*

- Counteract memory enhancing medications
- Dependency, tolerance, rebound insomnia

Watch [mmLearn.org](http://mmLearn.org) iCare presentation:

*“Importance of Sleep for Seniors”*

*(click on links to view the video)*





## Other Sleep Aids

- “Natural” Supplements: Melatonin (hormone) melatonin helps control your natural sleep-wake cycle.
- Best associated in helping maintain natural sleep wake cycles in shift work or with jet lag. Is “natural” if a pill is natural and has some interactions
  - » Blood-thinning medications (anticoagulants)
  - » Immunosuppressants
  - » Diabetes medications
  - » Birth control pills

Continue...



## Other Sleep Aids *(continued)*

- Herbal = Sleepytime tea with valerian (chamomile, valerian root)
  - » Valerian is a CNS depressant, a muscle relaxant, may affect heart vessels and heart rhythm.
  - » Liver toxicity has been associated with the use of valerian in herbal remedies
- <http://www.fda.gov/food/dietarysupplements/default.htm>

# Insomnia - MOST important to find out from your doctor WHY you can't sleep.

- Sleep hygiene...practice it and decide what are your contributing factors
- reflux
- restless leg
- exercising too late



Continue...

# Insomnia - MOST important to find out from your doctor WHY you can't sleep. *(continued)*

- breathing issues, sleep apnea
- side effects from other medications (OTC migraine medications)
- caffeinated beverages



Continue...

# Insomnia - MOST important to find out from your doctor WHY you can't sleep. *(continued)*

- Sport or vitamin drinks (guarana & stimulation, dandelion root extract & urination)
- Depression, anxiety
- Long naps during the day



Continue...



# Insomnia - MOST important to find out from your doctor WHY you can't sleep. *(continued)*

- Traveling
- Decrease in metabolism of caffeine as people age
- Your partner (schedules, snoring)



# Herbal Remedies – gentler (?)

- Guarana
- Green Tea Extract
- Ginger
- Ginko Biloba
- Garlic
- Ginseng
- Saw Palmetto
- St. John's Wort
- Dandelion Root
- Kava Kava
- Hawthorne (+ digoxin)
- Black licorice extract
- Dong Quai
- Feverfew
- Echinacea
- Ephedra

## USP Seal For Supplement Safety: United States Pharmacopoeia



- Supplement manufacturer volunteers to have USP test and verify their product.
- Contains the ingredients listed on the label, in the declared potency and amounts.
- Does not contain harmful levels of specified contaminants heavy metals (e.g., lead and mercury), pesticides, bacteria, molds, toxins, or other contaminants.

Continue...

# USP Seal For Supplement Safety:

## United States Pharmacopoeia

*(continued)*



- Breaks down and releases into the body within a specified amount of time
- Manufactured with FDA current standards using sanitary and well-controlled procedures. Assurance of safe, sanitary, well-controlled.

<http://www.usp.org/USPVerified/dietarySupplements/>

# Why do you have to take some meds with foods and others on an empty stomach?

- Some medications are absorbed better on an empty stomach,
  - » may bind to food other medications (e.g. thyroid preparations), though you can titrate dose
- Some work better on an empty stomach (e.g. Prilosec)

Continue...

# Why do you have to take some meds with foods and others on an empty stomach?

*(continued)*

- Some can be harsh on stomach, so better buffered with food NSAIDS, iron supplements
  - » trade off between absorption & decreasing stomach upset, though constipation will likely remain constant as a side effect

Continue...

# Why do you have to take some meds with foods and others on an empty stomach?

*(continued)*

- Some require acid to be better absorbed and therefore should be given with food or within an hour after when stomach acid is higher.
- Calcium citrate VS calcium carbonate, Citrate is better absorbed so does not need to be taken with food.

Continue...

# Why do you have to take some meds with foods and others on an empty stomach?

*(continued)*

- Calcium dose should be separated throughout the day, no more than 500-600 mg/time
- Calcium + vitamin D = increased absorption (though there is a process and different types)

Continue...



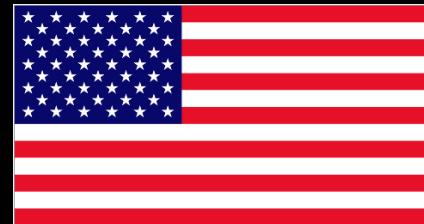
# Why do you have to take some meds with foods and others on an empty stomach – NOT JUST FOOD. *(continued)*

- Vitamins+ minerals + tea &/or coffee &/or alcohol.
  - » Tannins may decrease absorption of thiamine (vitamin B1), calcium, iron, zinc and other vitamins or minerals
  - » May want to separate your supplements from your tea and/or coffee.
  - » Likewise, alcohol consumption can decrease vitam



## Americans- bigger, better, faster, more

- Offsetting this by increasing your dose is not a good idea - too much of anything is a bad thing
  - » Too much calcium – can lead to constipation, excess calcium levels if you have kidney issues, can decrease zinc & iron absorption.
  - » Too much B6 – possible nerve issues
  - » Excess vitamin E -gynecomastia



## If I have missed a dose of meds...how do I know if I should go ahead and take it later or wait until the next dose

- Depends on the medication and the timing.
  - » scheduled acetaminophen (Tylenol) or naproxen (Aleve) for arthritis, 1-2 hours surrounding missed dose & adjust next dose a bit, don't double up when next dose is due.



Continue...

If I have missed a dose of meds...how do I know if I should go ahead and take it later or wait until the next dose *(continued)*

### ALEVE (naproxen) EXAMPLE:

- Do not exceed 2 caplets in any 8 to 12 hour period
- Do not exceed 3 caplets in a 24 hour period
- Similar for blood pressure medications and anticoagulants in many cases
- Many of the prescription medications will have guidance for this, because most items are taken on a “as needed” basis. OTC tend to have less, but are getting better



# Why do you have to sit up after taking some meds?

- Some medications, usually the prescription bisphosphonates for osteoporosis can be damaging to tissues, erode the esophagus.



Continue...

# Why do you have to sit up after taking some meds? *(continued)*

- These you usually have to drink a full glass of water and sit up for at least 30 minutes and until first food of the day.



Continue...

# Why do you have to sit up after taking some meds? (continued)

- If you have GERD or hiatal hernia, you may want to practice this rule all the time with all medications, especially ibuprofen, naproxen aspirin.



# OTC cough (or cough and cold) meds

- Expectorants - guaifenesin (Mucinex, Robitussin)
  - » thins out lung secretions, must take with lots of water
- Suppressants – dextromethorphan (things that say DM, Delsym)
  - » reduces the need to cough



Continue...



## OTC cough (or cough and cold) meds (continued)

- CF, PE, Cough & Cold, Severe congestion – OTC (phenylephrine) behind pharmacy counter (pseudoephedrine)
  - » nasal decongestants contract blood vessels to decrease stuffy nose.



Continue...

## OTC cough (or cough and cold) meds (continued)

- May increase blood pressure, contracts more than nasal blood vessels
- Watch if you are taking BP medications or have heart disease
  - » especially if your BP readings are usually high or vary a great deal
  - » If you have thyroid disease, diabetes, or difficulty in urination due to an enlarged prostate gland or otherwise



# Nonsteroidal Anti-inflammatory Drugs (NSAIDs)

- Naproxen (Aleve), ibuprofen (Motrin), acetylsalicylic acid (aspirin, ASA).
- Plus blood thinners or in combination with each other can increase bleeding risk, stomach ulcer risk
- Can counteract some BP medications



# Aspirin (acetylsalicylic acid, ASA)

- Eases pain and can decrease inflammation
- Different than acetaminophen (Tylenol, acetaminophen, APAP), but people tend to confuse them
- Increased publicity now to use as pain reliever, has fallen a little behind in this area, except for heart health.



# Aspirin

- Also has a maximum dose, 4000 mg/24 h
- Don't forget Reye's Syndrome – should not give to people < 20 years old with influenza, chicken pox or fever with viral infection
- Is in more items than you may think (migraine medications, Alka-Seltzer)



Continue...

## Aspirin *(continued)*

- Low dose aspirin + ibuprofen (Motrin) may decrease heart protection because competes for binding on platelets (blood clotting cells)
- More likely than Tylenol to cause GI upset, GI bleeding or interact with medications to cause bleeding complications (e.g. Coumadin- warfarin)



# Drug Interactions - Acid reducers

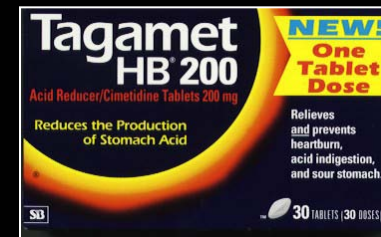
- H2 Blockers: Zantac (ranitidine), Pepcid (famotidine), Tagamet (cimetidine)
  - » Watch dose if you have kidney issues
- PPI: Prilosec (omeprazole), Prevacid (lansoprazole)
  - Enteric coated NSAIDs (naproxen) – protective coating may dissolve too soon, negating protective effects
  - Supplement ginger may decrease effect of acid reducers.
  - Acid reducers can decrease absorption of:
    - B12
    - Iron
    - Calcium
    - Synthroid (levothyroxine) – RX



Continue...

# Drug Interactions - Acid reducers (continued)

- Tagamet (cimetidine) - interacts with numerous other medications, check with your pharmacist.
- OTC: green tea, guarana, caffeine
- RX:
  - » theophylline (for asthma)
  - » warfarin (blood thinner)
  - » phenytoin (for seizures)
  - » Some antidepressants, antipsychotics





## Drug Interactions – Other Acid reducers, indigestion medications + kidney disease

- Laxatives containing magnesium – milk of magnesia (MOM)
  - Can increase magnesium levels



Continue...

# Drug Interactions – Other Acid reducers, indigestion medications + kidney disease *(continued)*

- Acid reducer – Tums, Rolaids etc.
  - Can increase your calcium levels



Continue...

# Drug Interactions – Other Acid reducers, indigestion medications + kidney disease *(continued)*

- Indigestion - Mylanta, Gaviscon etc.
  - » Can increase aluminum or magnesium levels

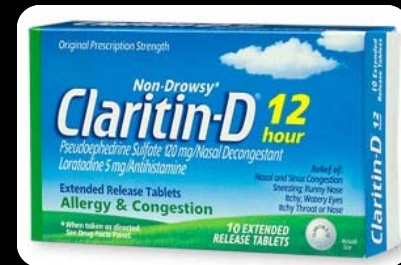


# Antihistamines Plus..

- Plus Dramamine or Bonine for motion sickness  
OR
- Plus Cough or cold medication
  - » duplication of therapy & side effects: confusion, sedation, urine retention, dry mouth, dizziness
  - » Also try not to take these with alcohol for the same reasons

# Antihistamines may sometimes worsen...

- Glaucoma
- Issues with urinating, due to an enlarged prostate gland or otherwise
- Breathing problems, such as emphysema or chronic bronchitis



# Cough medicines plus..

- Sleep aids, antianxiety meds, pain meds, tranquilizers, alcohol (DM products)
- glaucoma or difficulty in urination due to an enlarged prostate gland or otherwise

# Cough medicines may worsen

- Glaucoma
- Issues with urinating, due to an enlarged prostate gland
- Breathing problems, such as emphysema or chronic bronchitis



# Nicotine Replacement

- Levels may be increased with some medications or supplements (e.g. Zantac, some older migraine medications, dementia medications)



Continue...



# Nicotine Replacement

*(continued)*

- May decrease the effects of other medications (some anti-diabetic agents)
- Can affect heart rate or rhythm
- Can affect have blood pressure



# What happens if I take a med with alcohol when it says not to?

- Flagyl + alcohol = antabuse reaction
- Vicodin, Xanax, Valium, Ativan, antihistamines + alcohol = sedation and respiratory depression, increased depression, hallucinations, confusion, unsteady gait, vision issues, delusions.



# What happens if I take a med with alcohol when it says not to?

- OTCs + alcohol (acetaminophen, aspirin, ibuprofen, naproxen) can lead to toxicity
- Cough medicine with dextromethorphan + ETOH can increase sedation.



# What drugs have to be tapered?

- These are usually prescription medications
- After ~ 2weeks prednisone or other oral steroids
  - » Benzodiazepines (Xanax, Valium, Restoril, Ativan)
  - » Antidepressants (most)
  - » Long acting pain medications
  - » Older migraine medications
  - » Some BP meds (beta blockers – Toprol, Lopressor, Zebeta, etc.)

## What about the Sun...what will happen if I forget and go out in the sun when it says not to?

- Increased risk of burn and sun sensitivity
- Wear sunscreen, hat, protect skin with clothing
  - » Sulfa drugs, some NSAIDS, antibiotics
- Increased risk of dehydration – fall risk, confusion, kidney failure
  - » Diuretics (water pills), OTC or prescription



# OTC General Tips

- Keep and take med list to all MDs include herbals, OTCs, things you take occasionally
- IF you do not take your meds as directed (i.e. you only take your BP meds when you feel you need to) tell your doctor/caregiver
- Use 1 pharmacy whenever possible (NOTE: we cant add other data in if we don't fill the rx)



Continue...

## OTC General Tips *(continued)*

- Ask pharmacist about interactions, again include herbals, OTCs, things you take occasionally if unsatisfactory response ask a different pharmacist
- Brown bag events with pharmacy schools

Continue...

## OTC General Tips *(continued)*

- Question MD before, during and after taking the meds
- Repeatedly examine med list revisit meds as a cause for problems.





# If you suspect something is wrong

- Call your pharmacist
- See your doctor
- Call 9-1-1 or Poison Control at 1-800-222-1222

# Q&A



## Appreciation is extended to

- Baptist Health Foundation
- Methodist Healthcare Ministries Foundation
- The South, West, & Central Consortium Geriatric Education Center of Texas (SWAC -C GEC)
- Pryor Trust
- Many other individuals and organizations who support the mission of [mmLearn.org](http://mmLearn.org)



# To Access Resources:



Click on the "paperclip" button above the video player to open links to resources.

The screenshot shows a presentation slide with a video player on the left and a list of links on the right. The video player shows a man in a suit speaking. The links list includes 'Advocacy, Action, Answers on Aging', 'What is a Matter of Balance?', 'Healthy Aging Programs', and 'A Home Fall Prevention Checklist for Older Adults'. The slide footer includes the iCare logo and the name and title of David A. Smith MD.

**Doctor and Patient Communication - How to Talk to Your Doctor**

David A. Smith, M.D., FAAFP, CMD, Geriatric Consultants of Central Texas, P.A.

Sometimes appointments with doctors can seem rushed or confusing. Learn from a doctor's perspective the best way to get the most out of each visit with your physician and what questions to ask. The time you have with your physician is short - there's not a second to waste.

4/22/2011 3:40 PM CDT Length: 00:52:55

**Presentation Links**

- Advocacy, Action, Answers on Aging
- What is a Matter of Balance?
- Healthy Aging Programs
- A Home Fall Prevention Checklist for Older Adults

David A Smith MD, FAAFP, CMD  
President, Geriatric Consultants of Central Texas, PA

iCare

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A screenshot of the mmLearn.org website. The header features the mmLearn.org logo and navigation tabs: Home, Healthcare Professionals, Pastoral Caregivers, Family Caregivers, Online Videos, and MSM Use. The main content area includes a globe icon with a mouse cursor, a mission statement, and several promotional boxes for videos and a conference. A large blue arrow points to the "Donate" button in the footer.

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