



Warfarin Information Newsletter

SUMMER/FALL 2019

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Pictured above (left to right): Yanni Koukounas (University of Wisconsin-Madison and Villanova University), Meghan Wagner (University of Mississippi), Erin Kozlow (Creighton University), Abby Nemeth (Wilkes University), Lauren Kunkel (Duquesne University), and Nick Hastain (Thomas Jefferson University)

Meet Our New Pharmacy Residents!

We welcome our six new pharmacy residents for the 2019-2020 year. These residents have each graduated from an accredited pharmacy school and are licensed to practice pharmacy in PA. They will spend one year in various pharmacy practice settings at our institution, including the Anticoagulation Clinic. When coming to the clinic, please welcome the new faces you may see. These residents will staff the 30 Hope Drive Fingerstick Clinic.

Aspirin: An Old Drug with New Guidelines

For many years, people were told that daily, low-dose aspirin guarded against heart disease. Studies now show that aspirin is not for everyone and may not help as previously thought.

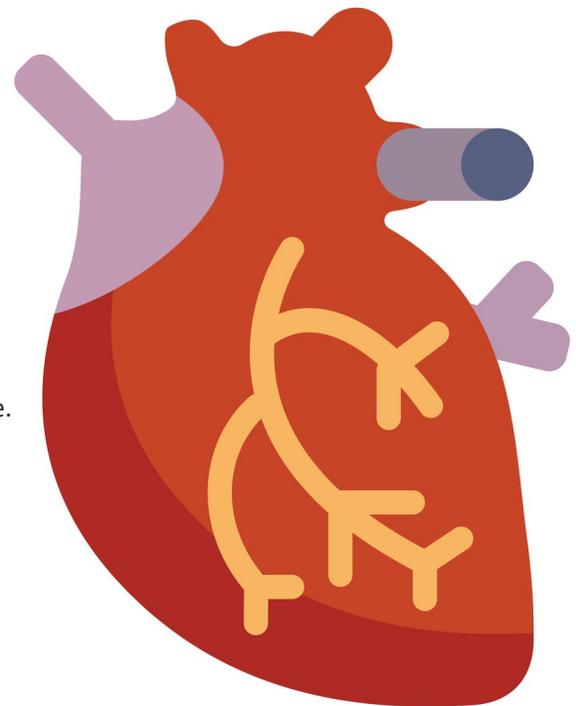
Researchers now say that aspirin should be used only by patients who have had a heart attack or stroke. For people at low risk of heart attack and stroke, the danger of bleeding and other complications outweigh the benefits of preventative aspirin use.

If you have any of the conditions, or a history of the procedures below, you are a good candidate for aspirin therapy:

- Heart attack (Myocardial Infarction)
- Ischemic stroke
- Coronary artery disease (CAD)
- Peripheral artery disease (PAD)
- Stents
- Heart valve replacements
- Coronary artery bypass grafts (CABG surgery)

The bottom line? Don't take aspirin unless your doctor prescribes it.

As always, consult your physician before starting or stopping medications, and be sure to let the Anticoagulation Clinic know about any medication changes at your next visit!





Using Medical Marijuana With Warfarin...

Is it Safe?

Pennsylvania state law now allows patients to use medical marijuana only with an approved medical marijuana dispensing card. If you are a patient who is currently using or is considering using medical marijuana, you may be asking yourself – *is it safe to use while taking warfarin?* Currently, we do not know all the effects of medical marijuana on different medications, but we DO know that it interacts with warfarin and can change your INR. This change can also depend on the type of medical marijuana product you use (i.e. tablets, oil, liquid, inhalation). In most cases, medical marijuana can increase your INR. It is important to watch for any signs of bruising or bleeding when you use medical marijuana and communicate with your doctor and pharmacists at the Anticoagulation Clinic.

Frequently Asked Questions:

Q Can I use medical marijuana with warfarin?

A Yes, but with extreme caution. You should always make your primary doctor and pharmacist aware that you intend to use medical marijuana so we can monitor changes in your INR.

Q Does it matter what form of medical marijuana I use with my warfarin?

A Medical marijuana is available as tablets, capsules, lotions, oils, inhalations and many other different formulations. Based on current evidence, we do not know if one form of medical marijuana causes more changes in INR but studies have shown that *smoking* medical marijuana will increase INR.

Q Why does medical marijuana change my INR?

A Medical marijuana has two chemical components: THC (tetrahydrocannabinol) and CBD (cannabidiol). Both of these chemical components of medical marijuana directly prevent your body from breaking down warfarin. This causes warfarin to be left in your body for a longer period of time which may increase your INR.

Q I rarely use medical marijuana, do I really have to let my primary doctor and pharmacist know?

A Yes. Using medical marijuana even once can increase your INR and increase the risk of bleeding. It is important for your primary doctor and pharmacist to know when you use medical marijuana because this may change your dose of warfarin.

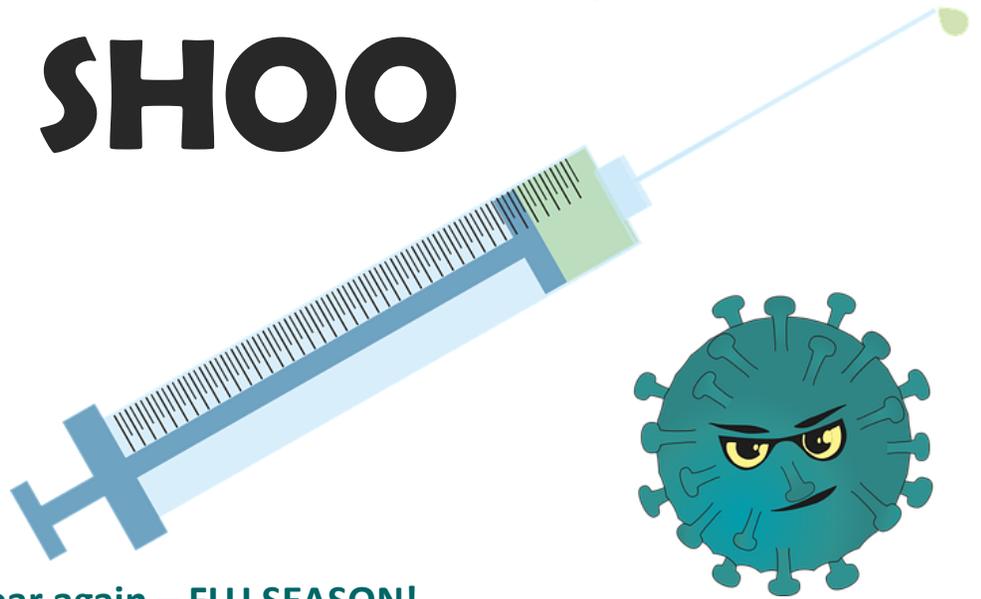
Q How do I know if medical marijuana is interacting with my warfarin?

A By checking your INR. You may see an increase in your INR when using medical marijuana and warfarin together. You may also notice that you bruise and bleed more easily, which may be signs of an increased INR.

Q Where can I find more information on medical marijuana use in Pennsylvania?

A More information can be found at www.pa.gov under the “guides” section. This website provides more information on getting registered, finding a physician, and locating dispensaries in the state of Pennsylvania.

How to SHOO the Flu



It will soon be that time of year again – FLU SEASON!

“The flu” is a contagious respiratory disease caused by the influenza virus, which can lead to severe symptoms requiring hospitalization and lead to death in some circumstances. People are at high risk of getting the flu from October through March. Even though people may get the flu despite receiving the flu vaccine, several studies have shown that they will have less severe symptoms. Currently, the Centers for Disease Control (CDC) recommends everyone six months of age and older receive the flu vaccine every year.

It is important to get the flu shot not only to protect yourself from the flu virus, but to also protect people who cannot receive the flu shot (such as newborns). The more people who are protected against the flu, the less likely the flu is able to spread from person-to-person. This is because the virus can only survive and replicate in people not protected against the flu. We refer to this concept as “herd immunity”. In order for herd immunity to be successful, everyone who *can* get the flu shot *needs* to get the flu shot. So do your part, and contribute to your community’s immunity against the flu!

YOU CANNOT GET THE FLU FROM THE FLU SHOT. A lot of people believe this myth, but, in fact, the flu shot is made with viruses that have been killed. Since the virus in the vaccine is dead, you are not able to get the flu from receiving the vaccine. You may still experience some mild side effects following the flu shot, which include soreness and redness at the injection site, low grade fever, or mild body aches.

It is important to get the flu shot every year because the flu virus continues to evolve and change. Thus, the contents of the flu shot must change each year according to the predictions for the upcoming season. Furthermore, your protection with the flu vaccine declines over time, and it is recommended for you to receive a flu shot every year.

Flu shots are conveniently available in places such as the Anticoagulation Clinic, local pharmacies, and your doctor’s office. Not only is it important to receive the flu shot every year, but it is highly recommended to always stay up-to-date on your other vaccines including tetanus, pertussis, measles, rubella, herpes zoster and hepatitis, to name a few. The concept of herd immunity still applies to these vaccines as well. You have seen reports on the news of several outbreaks of vaccine-preventable diseases occurring due to the increase of unvaccinated individuals. This occurs by the virus or bacteria replicating and spreading throughout the community.

Don’t wait – VACCINATE!!!

Colds, Antibiotics and Warfarin:

How getting sick can affect your INR

In the winter, your risk of getting sick is higher due to germs being more prevalent. If your symptoms are due to bacteria, your doctor may prescribe an antibiotic, but some of them can affect your INR.

The effect of most antibiotics is an increased INR which puts you at risk for bleeding. Antibiotics can have a high risk, moderate risk, or little to no risk when interacting with warfarin. In addition to the antibiotics, infections can increase your INR as well. Symptoms such as diarrhea, vomiting, poor appetite, and fever can cause your INR to be out of therapeutic range. If you are prescribed an antibiotic, it is important to tell your Anticoagulation Clinic, so they can assess the antibiotic and closely monitor your warfarin dose. It's also important to tell the doctor prescribing the antibiotic that you take warfarin.

Although antibiotics can affect your INR, always finish the regimen even if you start feeling better. If the infection is still in your body, the surviving bacteria will multiply and develop resistant properties.



Be proactive and inform the Anticoagulation Clinic if you're sick or are taking antibiotics BEFORE your INR increases!

Word Search

Please find seven of these medications listed. Answers will appear in the next edition.

Find seven medications that may affect INR.

- Clindamycin
- Rifampin
- Bactrim
- Fluconazole
- Nystatin
- Amiodarone
- Augmentin
- Cefdinir
- Cephalexin
- Vancomycin
- Cefazolin

B	X	C	B	J	Y	R	T	Z	V	N	M	F
N	A	L	P	Q	C	E	R	D	A	P	S	L
A	S	C	F	I	E	Y	K	J	N	L	W	U
U	V	Z	T	P	F	S	C	B	C	M	L	C
G	O	I	A	R	D	V	K	Q	O	C	M	O
M	N	L	W	V	I	Q	M	I	M	U	P	N
E	A	P	P	L	N	M	U	P	Y	X	N	A
N	M	E	T	R	I	G	X	Z	C	D	T	Z
T	P	E	N	I	R	N	Y	M	I	O	U	O
I	R	I	F	A	M	P	I	N	N	P	M	L
N	I	W	C	E	F	A	Z	O	L	I	N	E

Forbidden Fruits?

Cranberry and Grapefruit Juice with Warfarin

While taking warfarin, it is important to always consider what you are eating and drinking throughout the day. There is much emphasis placed on vitamin K containing foods, since vitamin K and warfarin work against each other. Therefore, changing diet can affect how warfarin works on the body. Some foods such as cranberry and grapefruit do not contain significant amounts of vitamin K. However, many people have asked if it's okay to consume these while taking their warfarin.

It has been thought that cranberry juice can increase INR, which would increase your risk of bleeding. Both warfarin and cranberry are broken down by the same enzyme in the body. Because of this possible concerning interaction, studies were conducted. Two studies found that drinking cranberry juice did not affect warfarin. Patients in one of the studies consumed two 8-ounce glasses of cranberry juice daily! Due to the findings from these newer studies, the Food and Drug Administration (FDA) removed the warning against cranberry consumption with warfarin therapy in 2011. Therefore, drinking usual amounts of cranberry juice has little risk to patients taking warfarin.



Now, what about grapefruit juice? Grapefruit juice has the same interaction with warfarin as cranberry juice, possibly leading to a higher risk of bleeding. However, one study found that drinking 24 ounces of grapefruit juice every day did not have an effect on warfarin. Since there is not a lot of information regarding this interaction, grapefruit does not have to be avoided. However, it is best to consume a moderate consistent amount of grapefruit.

What medications do interact with these juices? Cranberry juice has minimal reports for interactions with medications. However, grapefruit juice may interact with your cholesterol medications such as lovastatin and simvastatin, your transplant medications like tacrolimus and everolimus, your heart medications like amiodarone and dronedarone, as well as an anti-viral medication called Maraviroc.

So, what's the take home point? Both cranberry and grapefruit may be consumed in moderation while taking warfarin. However, other medications may interact with cranberry and grapefruit juice. If you choose to add either of these to your diet, let your pharmacist and doctor know.

Cranberry & Grapefruit Health Benefits:

1. High in vitamin C
2. Powerful antioxidants
3. Low in calories
4. Boosts immunity
5. Helps digestive health



TITLE **Mediterranean Baked Fish**



NUTRITION PER SERVING:

Calories 293
Fat 7 g
Cholesterol 44
Sodium 59 mg
Protein 30.7g
Carbohydrates 18.2 g
Fiber 11.2 g

NOTES Makes 4 servings (Vitamin K content of sauce only = 7mcg per cup)

INGREDIENTS

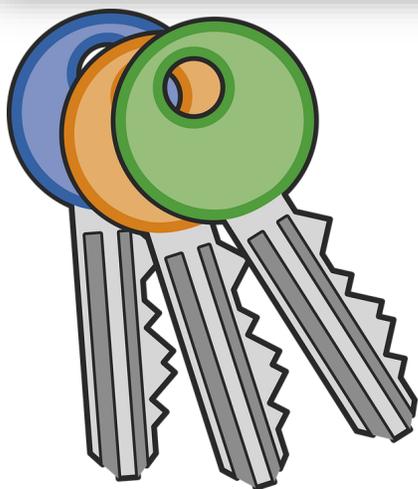
- 1 lb. tuna (or other fish*)
- 2 t. olive oil
- 1 c. diced onion
- 2 C. chopped tomato & juice
- 1 t. minced garlic
- 1 C. white wine
- 1/2 C. lemon or lime juice
- 1/2 t. minced oregano leaves
- 1/4 t. ground black pepper

Sauté onion and garlic in olive oil.

Add all remaining ingredients, except tuna, and cook 30 minutes on low heat to make a sauce.

Heat oven to 350 degrees. Spoon sauce over fish and bake until it flakes apart with a fork .

*Any other fish contains very little Vitamin K, except for mackerel, which contains 5mcg of Vitamin K per 100grams



Keys to Camp

Ever wonder what to do with those unused keys lying around the house?

Here's the chance to give those valuable keys a second life. The Kidney Foundation of Central Pennsylvania is introducing a new initiative to collect old keys and recycle them, providing money to support our annual summer camp for kids with kidney disease.

Money raised from this project will help kids attend Camp Kydnie!

A program partnership of the Kidney Foundation of Central Pennsylvania and Camps for Spiffy Kyds, Camp Kydnie takes place annually during the first week in July at Camp Victory in Millville, Columbia County.

Our Anticoagulation Clinic is collecting keys for this worthy cause!

Please drop off your unwanted keys at 30 Hope Dr. location, Suite 1003 in Hershey or at 121 Nyes Rd. location, Suite E, Harrisburg, PA

For more information about the Keys to Camp project, contact The Kidney Foundation of Central PA. 900 S. Arlington Ave., Suite 134A, Harrisburg, PA 17109 1-800-762-6202 www.kfcp.org





Did you know?

The Anticoagulation Clinic is now listed in the [My Penn State Health Patient Portal](#). When accessing your records through the patient portal, look for the Anticoagulation Clinic listing in the area where you communicate to providers. My Penn State Health is a secure website where you can conveniently manage your healthcare information related to your visits with Penn State Health providers. A mobile app is available for both Android and iPhone. Some features of the system are:

Secure messaging with your care team
View medical history
Manage prescriptions

Schedule and manage appointments
See test results
Manage family member accounts

You can [create your account online using the Self-Enroll process](#) or you may sign up during any visit to Penn State Milton S. Hershey Medical Center or one of our Medical Group locations.

[Visit pennstatehershey.org/myhealth](http://pennstatehershey.org/myhealth) to learn how to use your own personalized website.



UPC Pharmacy

Phone 717-531-8094

Hours: M-W 8am - 5:30pm

Th-F 8am - 6pm

Sat 8:30am - noon

Closed Sundays and holidays

Cancer Institute Pharmacy

Phone 717-531-1272

Hours: M-F 9am - 9pm

Sat-Sun 9am - 5:30pm

Holidays 9am - 5:30pm



Get a **90-day** supply of brand-name Coumadin at either of our pharmacies for only **\$10**.

Fingerstick appointments are available at both of our locations:

30 Hope Drive Hershey, PA 17033 and 121 Nyes Road Harrisburg, PA 17112

Call us at 717-531-5312 or

Toll Free: 1-800-243-1455 x 5312

Anticoagulation Clinic
Mail Code EC79
PO Box 859
Hershey, PA 17033-0859

Return Service
Requested



Contact us Monday through Friday from 9:00 a.m. until 5:00 p.m.
at (717) 531-5312 or 1-800-243-1455 Extension 5312 or
email any time: anticoagulationclinic@pennstatehealth.psu.edu

In case of emergency, please call 911.

How are we doing? Please send your comments to:

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Editor's Note: Please let us know of any future topics you would like to see.

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