



هيئة الدواء المصرية

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## EPVC Mission

Pharmaceutical Vigilance administration is the way through which the processes for authorizing, regulating, monitoring and evaluating the safety of any pharmaceutical product or medical device take place, in addition to disseminating any safety information for public health programs, healthcare professionals, and the Egyptian citizen.

The Pharmaceutical vigilance administration is an integral part of the Central Administration of Pharmaceutical Care that works on the enhancement of the pharmaceutical services to guarantee safe and effective use of medications in Egypt, under the patronage of the Egyptian Drug Authority.

## Newsletter

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## Polyethylene glycol (PEG) laxatives and starch-based thickeners: potential interactive effect when mixed leading to an increased risk of aspiration

Polyethylene glycol (PEG) laxative products treat constipation through an osmotic effect. Some PEG laxative products are available in the form of a powder, which must be dissolved in liquid before administration. Addition of a polyethylene glycol (PEG)-based laxative to a liquid that has been thickened with a starch-based thickener may counteract the thickening action, placing patients with dysphagia at a greater risk of aspiration.

### Review of risk

Polyethylene glycol (PEG) laxative are products used to treat constipation through an osmotic effect. They are indicated mostly for adults with some formulations also indicated for use in children.

### Starch-based thickeners

Thickened liquids are usually taken by patients with dysphagia, including people who are elderly or have disabilities that affect swallowing. Thickening the liquid before swallowing improves bolus control and reduces the risk of aspiration, which can be life-threatening.

There are two main types of thickening agents – a starch-based (for example, corn-starch) or a gum-based (xanthan gum). Most thickeners are classified as foods for special medicinal purposes and are used to thicken both liquids and foods to various consistencies. There are different brands of thickeners available and they can be in the form of powder or a liquid.

The recommendation to use a thickener should be based on the patient's degree of dysphagia (and potential risk of aspiration), the desired consistency required, the texture required, palatability, and other clinical considerations.

Addition of a PEG laxative to a liquid that has been thickened with a starch-based thickener can produce a mixture that is thin and watery – undoing the intended act of thickening. Patients with dysphagia



who swallow the thinner liquid are potentially at greater risk of aspiration.

Constipation and dysphagia coexist more commonly in the elderly and in people with disabilities that affect swallowing. Therefore these populations may be of particular risk if a PEG laxative is added to liquid thickened with starch.

### In reference to MHRA; Advice for Healthcare Professionals:

- \* There have been reports of a possible potential harmful interaction between polyethylene glycol (PEG) laxatives and starch-based thickeners when they are mixed together
- \* Combining the two compounds can counteract the thickening action and result in a thin watery liquid — patients with swallowing difficulties (dysphagia) are potentially at greater risk of aspiration of the thinner liquid
- \* Avoid directly mixing together PEG laxatives and starch-based thickeners, especially inpatients with dysphagia who are considered at risk of aspiration such as elderly people and people with disabilities that affect swallowing.

**References:** MHRA ([Click here](#))



# Local Case Report

## Case Report from Alexandria: Co-administration of Naproxen and Warfarin - Risk of severe bleeding and death



The regional center in Alexandria has received a case about a male patient in his seventies with a medical history of viral hepatitis C that developed complications of liver cirrhosis and esophageal varices. He was on Warfarin for 6 months with unchanged dose.

In addition; the patient was suffering from arthritis. One day he felt a severe pain in his knee, so he administered one tablet of Naproxen 220 mg that was present at home and used by his wife. This was without any medical advice.

Few hours later, the patient developed severe bleeding and vomited blood. He was transferred to the hospital, where he was diagnosed with internal bleeding and was admitted to the ICU. However, the patient died on the following day, due to this bleeding.

### Background :

**Naproxen** is a non-steroidal antiinflammatory drug (NSAID). It is a non-selective COX-1 and COX-2 inhibitor. It has analgesic, anti-inflammatory and antipyretic properties. Along with all drugs within the NSAID class, naproxen is associated with gastric irritation.

Naproxen is administered by the oral route as an immediate release and as a slow release preparation. The time to maximum effect is 2–4 hours with onset within 1 hour. <sup>[1]</sup>

**Warfarin** is an anticoagulant therapy, used in the prophylaxis and treatment of venous thrombosis and thromboembolic events.

It competitively inhibits the vitamin K epoxide reductase complex 1 (VKORC1), which is an essential enzyme for activating the vitamin K available in the body. Through this mechanism, warfarin can deplete functional vitamin K reserves and therefore reduce the synthesis of active clotting factors.

The hepatic synthesis of coagulation factors II, VII,



IX, and X, as well as coagulation regulatory factors protein C and protein S, require the presence of vitamin K. Vitamin K is an essential cofactor for the synthesis of all of these vitamin K-dependent clotting factors. <sup>[2]</sup>

### Labeled information:

According to Naproxen Summary of Product Characteristics, it was stated that: gastrointestinal bleeding, ulceration or perforation, which can be fatal, have been reported with all NSAIDs at any time during treatment, with or without warning symptoms or a previous history of serious gastrointestinal events.

The risk of gastrointestinal bleeding, ulceration or perforation is higher with increasing NSAID doses, in patients with a history of ulcer (particularly if complicated with hemorrhage or perforation), in smoking and in the elderly. <sup>[3]</sup>

According to Warfarin, it was stated that it increases the risk of bleeding, which can be severe or life-threatening. Gastrointestinal hemorrhage, rectal hemorrhage, hematemesis, pancreatitis, diarrhea, nausea, vomiting, melena, abdominal pain, cramping, flatulence, bloating are also reported. <sup>[4]</sup>

### According to the drug interaction checker:

There is a major interaction between Naproxen and Warfarin, as nonsteroidal anti-inflammatory drugs (NSAIDs) may potentiate the hypoprothrombinemic effect and bleeding risk associated with oral anticoagulants. <sup>[5]</sup>



## Case Report from Alexandria: Co-administration of Naproxen and Warfarin - Risk of severe bleeding and death **continued**

### Warnings and Recommendations :

1. Naproxen may cause stomach or intestinal bleeding, which can be fatal. These conditions can occur without warning while using this medicine, especially in older adults. <sup>[6]</sup>
2. Warfarin increases the risk of bleeding, which can be severe or life-threatening.
3. The co-administration of Naproxen (as NSAID) with Warfarin (as oral anticoagulant) may cause a high risk of bleeding.
4. NSAIDs should be administered with oral anticoagulants only if benefit outweighs risk and under medical supervision. In this case, the INR should be checked frequently and oral anti-coagulant dosage adjusted accordingly.
5. A special attention should be given to elderly patients. <sup>[5]</sup>

### References:

1. *Sciencedirect* ([Click here](#))
2. *NCBI* ([Click here](#))
3. *EMC* ([Click here](#))
4. *Drugs.com* ([Click here](#))
5. *Drugs.com* ([Click here](#))
6. *Drugs.com* ([Click here](#))



## Egyptian Pharmaceutical Vigilance Center Participation in EGYMEDICA Exhibition

In accordance with the role of the Egyptian Pharmaceutical Vigilance Center (EPVC) in ensuring providing safe and effective drugs, biologicals and medical devices for all patients and users, EPVC team has honorably participated in the activities of the 20th EGYMEDICA Exhibition held from 27-29th May 2021 at the Cairo International Conference Center in Nasr City.

Within the framework of the awareness-raising role of EPVC and based on its crucial role in monitoring and encouraging reporting of any adverse events or other medicinal related problems concerning drugs, biologicals and medical devices; the participating EPVC team has worked on conveying this message to visitors of the exhibition.

EPVC team contributed within the Egyptian Drug Authority booth in the Exhibition through engaging with the visitors giving them a brief about Pharmacovigilance and its role and activities, answering inquiries, handing out flyers and brochures about EPVC and pointing out how to contact the center to send reports or report via the EDA website or the E-reporting link via scanning the QR code.





**One report counts**

**A call for reporting**

### **What is Pharmacovigilance**

Pharmacovigilance (PV) is defined as the science and activities relating to the detection, assessment, understanding and prevention of adverse effects or any other drug-related problem.

### **What is the Egyptian Pharmaceutical Vigilance Center?**

With the increasing demand for patient's safety which is becoming more stringent, . The Egyptian Pharmaceutical Vigilance Center was established to be responsible for the safety monitoring of the pharmaceutical products throughout its lifecycle and it is the regulatory authority regarding Pharmacovigilance and its applications .

EPVC monitors the safety of all types of pharmaceutical products, including human medicines, biological products, supplements, cosmetics, veterinary medicines, medical devices, Biocides and pesticides

Please remember that you can report safety information of medicines to EPVC using the following communication information:

### **Communication information**

**The Egyptian Drug Authority (EDA)**

**Pharmaceutical Care Administration**

**The Egyptian Pharmaceutical Vigilance Center (EPVC)**



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Reporting link: [www.edaegypt.gov.eg](http://www.edaegypt.gov.eg)

<https://sites.google.com/view/epvc-reporting/healthcare-professional-public-adverse-drug-event-reporting/reporting-other-adverse-drug-event-cases>



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