



PHARMACY BULLETIN

Drug Allergy

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Drug allergy is an adverse drug reaction that results from stimulation of the immune system by a medication.

How does it occur?

It occurs when immune system identifies a medication as an invader or allergen and begins to produce antibodies to attack that medication.

How to identify a drug allergy reaction?

Drug allergies may cause many different types of symptoms. These allergic symptoms usually appear on the skin and mucosal surfaces as the mast cells that responsible for the allergic symptoms are located in abundance in these tissues.

Common signs and symptoms:

- * Itching
- * Skin rashes
- * Swelling of eyes, lips and tongue

Anaphylaxis, a life threatening condition that affects multiple body systems may occur within one hour of taking an oral medication or receiving an injection of the medication. Sometimes, the reaction may start several hours later.

Symptoms of anaphylaxis:

- * Rashes
- * Facial or throat swelling
- * Shortness of breath
- * Light-headedness
- * Vomiting
- * Shock



Stevens-Johnson Syndrome (SJS) and Toxic Epidermal Necrolysis (TEN) are the most severe forms of delayed drug allergic reactions which begin with fever and flu-like symptoms such as

- * Sore mouth and throat
- * Fatigue
- * Cough
- * Burning eyes

for several days. Then, followed by a painful red or purplish rash that spreads all over the body in an irregular pattern.

The areas of rash enlarge and often forming blisters in their

center which will then merge to form sheets of skin detachment. The painful blistering can also affect the surfaces of eyes, lips, mouth and genital region. Serious complications of SJS/TEN can include pneumonia, overwhelming bacterial infections (sepsis), shock, multiple organ failure, and eventually death.

Common triggers of drug allergies

- i. Penicillin and related antibiotics
- i. Antibiotics containing sulphonamide (Bactrim)
- ii. Anticonvulsants (Phenytoin, Carbamazepine, etc.)
- i. Aspirin & NSAIDs (Ibuprofen, Diclofenac, etc)
- i. Allopurinol

Precautions/Warnings

1. Seek immediate medical advice.
2. Bring along the allergy card issued by pharmacist to hospital/ clinic/ other pharmacy



Pic 1: Allergy card

Dengue Prevention and Role of Papaya Leaves Extract as Treatment



The best way to avoid dengue fever is to protect yourself from bites!

What is dengue fever?

Dengue fever is a virus infection caused by dengue virus which transmitted by the Aedes mosquito.

The principal symptoms of dengue fever are high fever (~40°C) and at least two of the following symptoms: severe headache, pain behind the eye, muscle and joint pains, nausea, vomiting, swollen glands or rash. Symptoms usually last for 2–7 days, after an incubation period of 4–10 days after the bite from an infected mosquito. Severe dengue is a

potentially deadly complication due to plasma leakage, fluid accumulation, respiratory distress, severe bleeding due to low platelet count, or organ impairment.

There is no specific antiviral treatment for dengue fever. The treatment is symptomatic and supportive in nature.

1. Bed rest - to relieve lethargy
2. Frequent oral fluid- to prevent dehydration
3. Paracetamol - to relieve fever and pain.

Use of aspirin and NSAIDs as analgesic should be **avoided**.

It is advisable to **seek medical care immediately** if a person shows any symptoms of dengue fever.



Prevention and Control of Dengue

At present, the main method to control or prevent the transmission of dengue virus is to combat vectors mosquitoes through:

- Removing all sources of stagnant water in potential breeding grounds
- Covering, emptying and cleaning of domestic water storage containers

on a weekly basis

- Using mosquito repellent or mosquito netting to prevent mosquito bites
- Wear long sleeves and pants for additional protection.
- Make sure window and door screens are secure and without holes

Extra precautions must be taken to prevent mosquitoes from biting the infected person and going on to bite others in the household.

Dengue vaccine is currently not available in Malaysia due to some controversy issues over safety.

Roles of Papaya Leaves Extract as Treatment

Papaya leaves are believed to have some roles in raising platelet count during recovery phase of dengue fever.

Earlier studies proved that the papaya leaves extract are safe and have an early effect on improving the platelet count in non-severe dengue.

However, manipulation of platelet count alone does not alter the clinical course of the disease as it is just a surrogate marker of disease progression or evolution. Plasma leakage and organ impairment should be the main focus of management.



Pic 2: Crude papaya leaf extract

Therefore, public should not rely entirely on the leaves extract and ignore the standard treatment for dengue fever.



Pic 3: Commercial papaya leaf extract

Ginkgo Biloba in Dementia

Dementia is a syndrome in which there is deterioration in memory, thinking, behaviour and the ability to perform everyday activities. It involves damage of nerve cells in the brain, which can occur in several areas of the brain. Dementia affects people differently, depending on the area of the brain affected.



people with dementia. However, conclusions regarding ginkgo for dementia are often conflicting. Hence, additional research is needed in this area.

Management of dementia

There is no anti-dementia treatment currently available to cure dementia or to alter its progressive course, but there are symptomatic treatment to manage the symptoms. These medications include cholinesterase inhibitor (Rivastigmine, Donepezil), memantine and medications for depression, sleep disturbances or agitation.

Several dietary supplements and herbal remedies such as vitamin E, omega-3 fatty acids and *Ginkgo biloba* have been studied for use in people with dementia. However, not all studies showed that these alternative medicines are effective in dementia treatment.

What is *Ginkgo biloba*?

Ginkgo biloba or Ginkgo is one of the oldest living tree species. It is also known as Maidenhair tree. It has short branches with fan-shaped leaves and inedible fruits that smell bad.



Pic 4: *Ginkgo biloba* leaves and fruits

Ginkgo leaves contain bioactive components such as flavonoids and terpenoids, which possess potent free radical scavenging and antioxidant properties.

Roles of *Ginkgo biloba* in dementia

Extract of *Ginkgo biloba* (EGb) has been extensively used as a herbal medicine to prevent cognitive decline as well as other disorders. The standardized *Ginkgo biloba* extract (EGb761) have been marketed as traditional medicines due to the presence of flavonoids and terpenoids and the capacity to increase microcirculation in brain and in body extremities.

Flavonoids inactivate deleterious toxic active oxygen, and terpenoids act as antagonists of platelet activating factor and exert neuroprotection in the brain. By combining these pharmacological activities, *Ginkgo biloba* is thought to improve memory and learning ability, blood flow in the microcirculation, hypoxia tolerance in brain cells, and reduce blood viscosity due to its antioxidant, anti-inflammatory, antiplatelet and other activities.

A large majority of clinical trials involving EGb 761 had showed the improvement of cognition and memory in both healthy individuals and dementia patient. Recent studies showed the combination use of EGb 761 with a commonly prescribed cholinesterase inhibitor, donepezil is more effective than either one alone. Overall, the scientific literature suggests that ginkgo benefits



Pic 5: Tablet of *Ginkgo biloba* extract

Clinical consideration:

Ginkgo should be use with caution in patient with comorbid conditions as ginkgo may alter the metabolism and effectiveness of some prescription and non-prescription medications

It is advisable to take ginkgo only under medical supervision to prevent any life-threatening complications.

Get emergency medical help if there is a sign of allergic reaction such as hives, difficulty breathing, swelling of face, lips, tongue, or throat.

Xenical in Slimming

What is Xenical?

Xenical is the trade name for *orlistat*, which is a reversible gastrointestinal lipase inhibitor that used to aid in weight loss or to help reduce the risk for weight regain after prior weight loss. It must be used together with a reduced-calorie diet and for use only in adults.

Orlistat is not used in everyone who wants to lose weight. It is indicated for obese patients with an initial body mass index (BMI) ≥ 30 kg/m² or ≥ 27 kg/m² in the presence of other risk factors such as hypertension, diabetes or dyslipidemia..

How it works?

Orlistat acts locally in the gut (intestine). It works by inhibiting enzymes (lipases) that break down dietary fats in the gut, preventing the absorption of the dietary fat and allows it to pass through the body undigested. This in turn reduces the number of calories absorbed by the body.

Taking orlistat is only part of a complete program of the weight loss treatment that also includes diet, exercise, and weight control. Following a healthy, low fat diet and exercise regularly may optimize orlistat treatment. Daily intake of fat, carbohydrate, and protein should be distributed over three main meals. If orlistat is taken with a diet high in fat (> 30% total daily calories from fat), risk of unpleasant side effects on stomach or intestines may increased.



Pic 6: Xenical capsules

Recommended dosing

The recommended dose of Xenical is one 120-mg capsule three times a day with each main meal containing fat. The capsule may be taken during or up to 1 hour after the meal. Doses above 120 mg three times a day have not been shown to provide additional benefit.

Patient must achieve at least 5% weight loss within 3 months otherwise treatment with orlistat may be stopped.

Warnings/Precautions

Patients who are pregnant, have chronic malabsorption syndrome, cholestasis or hypersensitivity to Xenical or to any component of this product should not take this medication.

Xenical has been shown to reduce the absorption of some fat-soluble vitamins (A,D,E,K) and beta-carotene, hence, multivitamin supplement that contains fat-soluble vitamins should be taken to ensure adequate nutrition. The supplement should be taken once a day at least 2 hours before or after taking Xenical, such as at bedtime.

Xenical may has interaction with certain drugs and diseases, patients should consult healthcare provider or pharmacist prior to use of Xenical as weight loss treatment.