



# PHARMACY BULLETIN

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## EDITORIAL TEAM

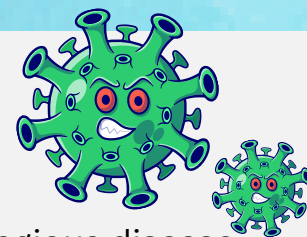
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## MEASLES

GO CHEE YIEN, PF UF44



### OVERVIEW

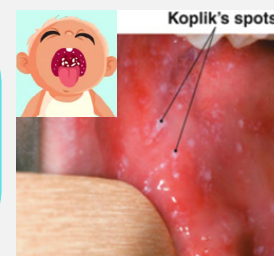
Measles, also known as rubeola, is a highly contagious disease caused by the measles virus (genus Morbillivirus, family Paramyxoviridae). It is spread from human-to-human through air-borne respiratory droplets and direct contact with infected secretions.

### SIGNS & SYMPTOMS



The disease is characterised by a prodromal stage of flu like symptoms (high grade fever, malaise, runny nose, cough) and conjunctivitis with photophobia.

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Measles exanthem appears 2-4 days after onset of fever, characterized by erythematous maculopapular rash which initially appears around the forehead or posterior occipital area, spreads downward and outward.

### COMPLICATIONS

The risk of severe measles complications varies greatly, depending on the person's age, nutritional status and co-morbidities. Complications are most common in children under 5 years, adults over age 30 and pregnant women.

Infected pregnant women are at a higher risk of hospitalisation, foetal loss, premature labour, pneumonia and maternal death. Intrauterine measles virus infection may range from a mild illness including low birth weight to a severe, fatal outcome.

Children who are malnourished, especially those without enough vitamin A or with a weak immune system, are at higher risk for complications.

## COMPLICATIONS - CONT...



Encephalitis



Otitis Media



Pneumonia



Blindness



Diarrhoea



## TREATMENTS

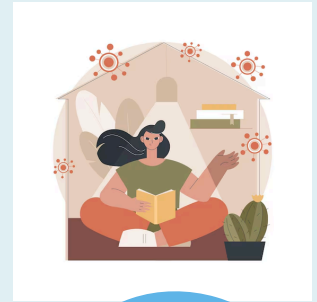
There is no specific treatment for measles. *Supportive treatments* to relieve symptoms and prevent complications include:

Antipyretic	such as paracetamol to relieve fever
Hydration	Oral rehydration is effective in majority of the cases; oral rehydration salts may be used especially in patients with diarrhea. IV fluid can be given if necessary.
Vitamin A	<ul style="list-style-type: none"> <li>• Vitamin A may be beneficial for reducing measles severity and risk of complications.</li> <li>• Vitamin A is recommended in:                             <ol style="list-style-type: none"> <li>a. hospitalized patients 6 months - 2 years of age with complications</li> <li>b. patients &gt;6 months of age who have not received vitamin A supplementation and who have any of the following risk factors: Vitamin A deficiency, immunodeficient state, impaired intestinal absorption, moderate to severe malnutrition, travel history to areas where high mortality rates are attributed to measles</li> </ol> </li> <li>• Dose can be taken as a single dose. Frequency BD if according to FUKKM.</li> <li>• Infant &lt;6 months of age: PO 50,000 IU</li> <li>• Infant 6 to 11 months of age: PO 100,000 IU</li> <li>• Children ≥12 months: PO 200,000 IU</li> <li>• Dose is repeated the next day and 4 weeks later especially in patients with ophthalmologic evidence of vitamin A deficiency.</li> </ul>

# PREVENTIONS

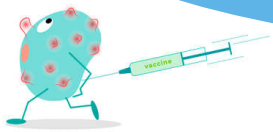
## Isolation

- Isolation of household or school contacts solely is not effective in preventing transmission of infection as spread of virus occurs before the onset of symptoms.
- Isolation of infected individuals should be done for 4 days after the initial appearance of rashes.



## Measles vaccine

- In Malaysia National Immunization Programme, Measles vaccine, included in the MMR (Measles, Mumps and Rubella) vaccination, 1st dose is recommended at 9 months old and 2nd dose later at 1 years old.



# REFERENCES

1. MIMS Malaysia. Measles. Available from: <https://www.mims.com/specialty/measles/signs%20and%20symptoms?channel=paediatrics>
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6. Ministry of Health Malaysia. Malaysia National Immunization Programme. Last reviewed Aug 2023.

# ADDITIONAL INFORMATION ON THE MALAYSIAN NATIONAL VACCINATION PROGRAMME (NIP)

The Malaysian National Immunisation Programme (NIP) was introduced in the early 1950s. Our Malaysian NIP was designed based on the World Health Organisation (WHO) Expanded Programme on Immunisation (EPI). The EPI recommends that all countries immunise against 6 childhood diseases. However, our Malaysian National Immunisation Programme (NIP) has expanded protection against 13 major childhood diseases.



KEMENTERIAN KESIHATAN MALAYSIA

## JADUAL IMUNISASI KEBANGSAAN

IMUNISASI	UMUR (BULAN)												UMUR (TAHUN)				
	0	1	2	3	4	5	6	8	9	12	15	18	21	7	13	15	
BCG	DOS TUNGGAL																
Hepatitis B	DOS KELAHIRAN																
DTaP-IPV-Hep B-Hib			DOS 1	DOS 2		DOS 3							DOS PENGGALAK				
Measles							SABAH SAHAJA										
MMR									DOS 1	DOS 2							
Pneumokokal (PCV)					DOS 1		DOS 2					DOS PENGGALAK					
JE (Sarawak Sahaja)									DOS 1				DOS PENGGALAK				
DT														DOS PENGGALAK			
HPV															1 DOS		
TT																	DOS PENGGALAK

**BCG** adalah Bacille Calmette-Guerin, vaksin yang memberi perlindungan terhadap tuberkulosis.

**Hepatitis B** vaksin hepatitis B untuk mencegah penyakit hepatitis B.

**MMR** adalah vaksin kombinasi measles (campak), mumps (beguk) dan rubella.

**JE** vaksin ini diberikan di Sarawak untuk mencegah penyakit Japanese Encephalitis.

**DT** dos penggalak yang memberi perlindungan terhadap difteria dan tetanus.

**TT** adalah Tetanus Toxoid yang diberi untuk mencegah penyakit tetanus (kancing gigi). diberi sebagai dos penggalak untuk meningkatkan paras antibodi.

**DTaP-IPV-Hep B-Hib** adalah vaksin kombinasi 6 serangkai yang memberi perlindungan terhadap difteria, tetanus (kancing gigi), pertussis (batuk kokol), poliomyelitis, Hepatitis B dan Haemophilus Influenzae type B.

**PCV** diberi untuk mencegah penyakit Pneumokokal serius yang disebabkan oleh serotype bakteria Streptococcus Pneumoniae tertentu.

**HPV** adalah vaksin Human Papillomavirus yang disediakan untuk murid sekolah perempuan tingkatan 1 atau remaja perempuan berumur 13 tahun yang tidak bersekolah. Ianya diberi untuk mencegah jangkitan HPV yang boleh menyebabkan kanser serviks/pangkal rahim.

### KEMASKINI OGOS 2023

**Q1: Where can our children receive their vaccinations under the National Immunisation Programme (NIP)?**

**A1: The National Immunisation Programme (NIP) vaccinations are provided free-of-charge at all government clinics across the country. They are also available at private clinics, where you may have to pay a small fee.**

**Q2: When does my child have to get these vaccines?**

**A2: There is a National Immunisation Programme (NIP) schedule (see below). It is important to follow this schedule closely as doctors and other public health experts have worked hard to come up with the optimal vaccination schedule, affording the most complete and safest protection possible. It is not advisable to skip or delay vaccines, as this will leave the child vulnerable to disease.**

The Malaysian National Immunisation Program (NIP) (2023).

Extracted from <https://immunise4life.my/the-malaysian-national-immunisation-programme-nip/> on 19th June 2024

# Comparison of Oral Iron-Containing Products (Adult)

Hospital Beaufort


Doi Jia Xin  
(PF UF44)

Product	Iberet Folic-500®	Maltofer Fol®	Haematinic
<b>Iron preparation</b>	Ferrous sulfate 525mg	Iron(III)-hydroxide polymaltose complex (IPC)	Ferrous fumarate 200mg
<b>Elemental iron</b>	105mg	100mg	66mg
<b>Product description</b>	Oblong, elongated, red colored film-coated tablet	Chewable tablet, chocolate flavour	Round, reddish-brown colored mottled tablet
<b>Dose</b>	1 tablet OD	1 tablet OD Pregnancy: 2 - 3 tablets per day (may be divided or all at once)	200mg OD Treatment: 200mg TDS or QID, as needed & tolerated
<b>Characteristics</b>	Gradumet technology, controlled-release (CR) iron	Large molecules, CR iron as taken up in gut via active mechanism	*With Vit C 100mg, Vit B complex & folic acid 5mg (1 tab each)
Folic acid	0.8mg	0.35mg	5mg*
Vit. B1	6mg		10mg*
Vit. B2	6mg		15mg*
Vit. B3	30mg		15mg*
Vit. B6	5mg		2mg*
Vit. B12	25mcg		2mcg*
Vit. C	500mg		100mg*
Sodium		10mg	
Ca Panthothenate	10mg		
<b>Direction of administration</b>	Swallowed whole as risk of mouth ulcerations and tooth discoloration if sucked, chew or kept in mouth. Best taken on empty stomach. If gastric intolerance occurs, may be taken after a meal.	Can be chewed or swallowed whole during or immediately after a meal. Does not interact with food component (eg. coffee, tea) and calcium.	Best taken on empty stomach. If gastric intolerance occurs, may be taken after a meal.
<b>Prescriber category</b>	A/KK: O&G department	A/KK: O&G department	C
<b>Price (30 tablets)</b>	RM18.00	RM19.48	RM6.44

References: (1) Product leaflet Iberet Folic-500®, Abott Laboratories (M) Sdn Bhd. (2) Product leaflet Maltofer Fol®, Zuellig Pharma Sdn Bhd. (3) Product leaflet Idaman Ferrous fumarate 200mg, Idaman Pharma Manufacturing Sdn Bhd.

**NEW**

# UPDATE: WARFARIN BRAND CHANGE IN HOSPITAL BEAUFORT

JENAMA	APO-WARFARIN	MAFORAN
1 MG		
2 MG		
3 MG	---	
5 MG		



# NPRA SAFETY ALERTS



## NPRA Safety Alerts

### Amoxicillin: Risk of Aseptic Meningitis

[CLICK HERE](#)  to view the safety alert, which is available at  
[www.npra.gov.my](http://www.npra.gov.my)



National Pharmaceutical Regulatory Agency  
Ministry of Health, Malaysia

**Aseptic meningitis is an inflammation of the linings of the brain and spinal cord without evidence of an infectious cause. It is characterised by neurological symptoms, including fever, headache, and altered mental status, as well as cytological abnormalities in the cerebrospinal fluid (CSF).**

**There is growing evidence suggesting that amoxicillin-induced aseptic meningitis (AIAM) may be a type IV delayed hypersensitivity reaction mediated by T cells.**

**The reported time-to-onset of AIAM ranged from 3 hours to 13 days after amoxicillin administration, with a high incidence of recurrent episodes. Fever and headache were reported as the most common symptoms. Typical CSF findings included leukocytosis with lymphocytic predominance, elevated CSF protein, normal CSF glucose (unlike low CSF glucose in bacterial meningitis), and negative culture. Symptoms generally resolved within 1 to 4 days after discontinuation of amoxicillin-containing products (i.e., positive dechallenge), while some cases demonstrated positive rechallenges of AIAM.**

**Men may be at higher risk for AIAM than women, as evidenced by a higher-than-expected number of AIAM reports received from males and growing evidence of the sex differences in immune responses.**

#### Advice for Healthcare Professionals

- Be aware of the very rare risk of aseptic meningitis following the administration of amoxicillin-containing products, especially in male patients.
- Advise patients to be vigilant and seek immediate medical attention if they experience any signs and symptoms of aseptic meningitis, such as fever, headache, nausea, vomiting and neck stiffness, while undergoing treatment with amoxicillin-containing products.
- If suspected of having aseptic meningitis, after ruling out other infectious or disease-related causes, obtain a comprehensive medication history and consider the possibility of AIAM in patients prescribed amoxicillin-containing products.
- AIAM is reversible after drug withdrawal and generally resolves without the need for further treatment. Prompt recognition of AIAM can prevent aggressive diagnostic procedures,



# NPRA SAFETY ALERTS



## NPRA Safety Alerts

Sodium-Glucose Co-Transporter 2 (SGLT2) Inhibitors (Dapagliflozin, Empagliflozin, Canagliflozin): Interaction with Lithium (for Therapeutic Use) Leading to Decreased Serum Lithium Concentration



to view the safety alert, which is available at [www.npra.gov.my](http://www.npra.gov.my)



National Pharmaceutical Regulatory Agency  
Ministry of Health, Malaysia

**SGLT2 inhibitors (e.g. empagliflozin) - a class of medications indicated for the treatment of T2DM & reducing the risk of CV events and end-stage kidney disease by inhibiting SGLT2, a co-transporter primarily located in the proximal convoluted tubule (PCT) of the kidneys.**

**SGLT2 inhibitors interact with lithium resulting in decreased serum lithium concentration & the mechanism underlying can be explained as a pharmacokinetic interaction.**

**Lithium, predominantly excreted in the urine, can substitute for sodium and be reabsorbed in the PCT via sodium-transporting systems, presumably due to their atomic similarity. Inhibition of SGLT2 likely leads to increased urinary excretion of lithium and decreased serum lithium concentration, which potentially reduce lithium's therapeutic effectiveness. While existing theoretical models suggest minimal involvement of SGLTs, a recent literature case report describing positive dechallenge and rechallenge with empagliflozin-induced reduction in serum lithium concentrations suggests a more substantial role of SGLT2 in lithium reabsorption.**

### Advice for Healthcare Professionals

- Be aware that concomitant use of an SGLT2 inhibitor (including dapagliflozin, empagliflozin, and canagliflozin) with lithium may decrease serum lithium concentrations.
- Inform patients or their caregivers to consult doctors if they encounter signs and symptoms of mental disorders aggravation.
- Monitor serum lithium concentration more frequently during treatment with an SGLT2 inhibitor, particularly following initiation or dose changes.
- If reduced serum lithium concentrations are detected, consider titrating the lithium dosage or switching to an alternative treatment.



# NPRA SAFETY ALERTS



## NPRA Safety Alerts

Domperidone: Risk of  
Psychiatric Withdrawal Events  
When Used Off-Label for  
Lactation Stimulation

[CLICK HERE](#) to view the safety alert, which is available at  
[www.npra.gov.my](http://www.npra.gov.my)



National Pharmaceutical Regulatory Agency  
Ministry of Health, Malaysia

**Abrupt discontinuation or dose tapering of domperidone used off-label for lactation stimulation may lead to psychiatric withdrawal events e.g. depression, anxiety and insomnia.**

**Use domperidone at the LOWEST POSSIBLE DOSE FOR THE SHORTEST DURATION necessary.**

**inform patients about the potential about the potential risks upon abrupt withdrawal of long-term domperidone usage, including psychiatric manifestations.**

**This risk is commonly confused with postpartum depression, it is crucial to probe about domperidone usage in lactating others presenting with psychiatric symptoms.**

*Safety Alerts, National Pharmaceutical Regulatory Agency (NPRA) (2024).*

*Extracted from <https://www.npra.gov.my/index.php/en/health-professionals/safety-alertsen.html> on 19th June 2024.*

**THANK YOU**