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MUHAMMADIYAH  
YOGYAKARTA



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# ZOONOSIS

The future starts today,  
not tomorrow.

Siti Aminah TSE  
Bagian IKKK FKIK UMY





Asyhadu anlaa ilaaha illalloh  
wa asyhadu anna Muhammadan  
rasuululloh

Do'a belajar

**Rodliitu billaahi robbaa  
wa bil-istaami diinaa  
wa bi Muhammadin nabiyyaw wa  
rosuulaa**

**Robbi zidnii 'ilmaa  
warzuqnii fahmaa  
Aamiin....**

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# Zoonosis





# Tujuan Belajar

1. Mengetahui jenis zoonosis
2. Mengetahui faktor penyebab dan faktor risiko serta patogenesis zoonosis
3. Memahami cara penegakan diagnosis penyakit zoonosis
4. Memahami cara dan interpretasi hasil pemeriksaan penunjang
5. Memahami cara penatalaksanaan zoonosis




# Pengertian

- Yi. Penyakit kulit akibat gigitan, sengatan atau infestasi parasite.
- Gigitan parasit →
  - Reaksi inflamasi non alergi
  - Reaksi alergi/hipersensitivitas
- Infestasi parasit
  - Reaksi inflamasi ringan



# Jenis Zoonosis (SKDI 2012):

1. Insect bites, sting, infestation  
= Insect bites reaction
  2. Skabies
  3. Cutaneous Larva Migran
  4. Pedikulosis
  5. Filariasis
- 

# **Insect bites, Sting, Infestation**





# Insect bites, sting, infestation

Etiologi → patogenesis

1. Tungau : protein pd ludah → gatal, reaksi alergi
2. Kutu : ludah, toksin → reaksi alergi, paralisis
3. Laba-laba: toksin-neurotoksin → **urtikaria**, gejala sistemik
4. Kalajengking : neurotoksin
5. Blister beetle (kumbang) : cantharidin → **DKI toksik**
6. Kutu binatang (kucing, anjing, burung, hewan ternak) : **papular urtikaria**
7. Lalat : bertelur → **myiasis**
8. Ulat : **DKI, urtikaria**



# Penegakan diagnosis

## ✘ Anamnesis

- + Inkubasi : jam – hari
- + Durasi : hari – minggu – bulan
- + Gejala : gatal, nyeri, gejala sistemik (demam, pembesaran limfonodi)

## ✘ Pemeriksaan fisik

- + Insect bite reaction
- + Papular urtikaria
- + DKI toksik



Papular urticaria (ok.kutu):  
Papul eritem, sebagian punctum,  
multipel



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ies, Inc.

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**Papular urticaria: bedbug bites** Pruritic, urticaria-like papules at the sites of bedbug bites on the lower back at the waist. Bedbugs (*Cimex lectularius*) share human domains, residing in crevices of floors and walls, in beddings, and in furniture. They usually feed only once a week and less often in cold weather. Bedbugs can travel long distances in

Insect bite reactions ok. Serangga:  
Papul eritem dg punctum, ekskorsiasi, multipel



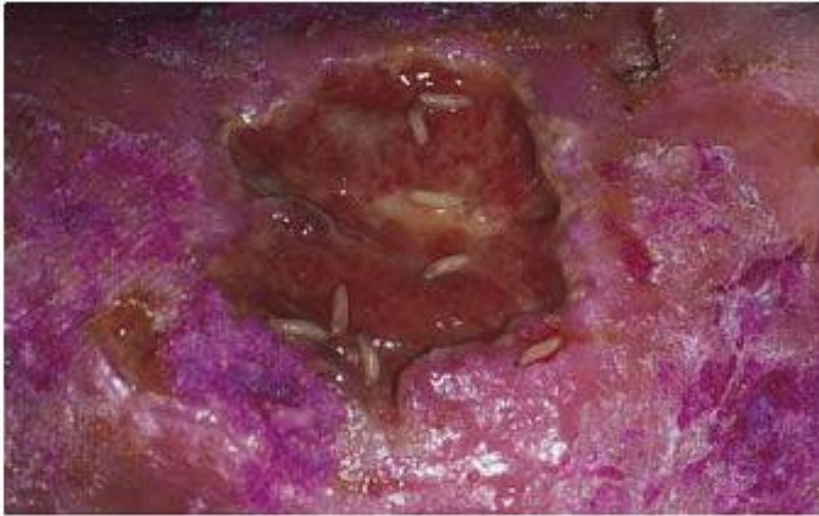


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**Urticarial plaque: spider** Urticaria plaque on the upper medial arm on day after a sp



Insect bite reactions ok. Laba-laba: urtikari (papul-nodul) eritem dg kulit sekitar eritem, odem, soliter



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Multiple larvae or maggots of the housefly are seen in a chronic stasis ulcer on the



Miasis

# Diferensial Diagnosis

Reaksi gigitan serangga



Reaksi gigitan serangga



Folikulitis  
Papul eritem, pustul,  
folikuler,





Papul, pustul folikuler



Papul, non folikuler, dg punctum



DKI toksik  
= D cantarides



Kissing phenomen, pustulasi, nekrose di  
bag tengah lesi



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Bulla di tengah lesi



Urtika, pucat di bagian tengah lesi



## Demodex in Skin Destroys Natural Beauty

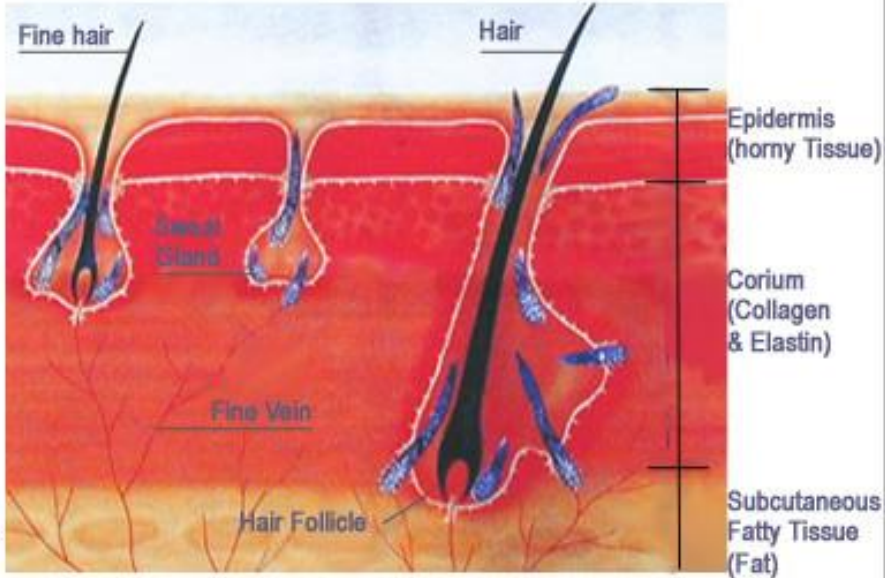
[ Demodex Mite size ]  
0.1 - 0.3 mm



Demodex  
Folliculorum  
(in hair follicles)



Demodex  
Brevis  
(in sebaceous glands)





# Terapi

- Kortikosteroid

- Topikal : mometason, desoksümetason, klobetasol

- Sistemik : prednison, dexametason, metil prednisolone

- 8-30 mg/hari (dosis prednisone)

- Antihistamin

- Sedatif : CTM, hidrosizin, mebhidrolin

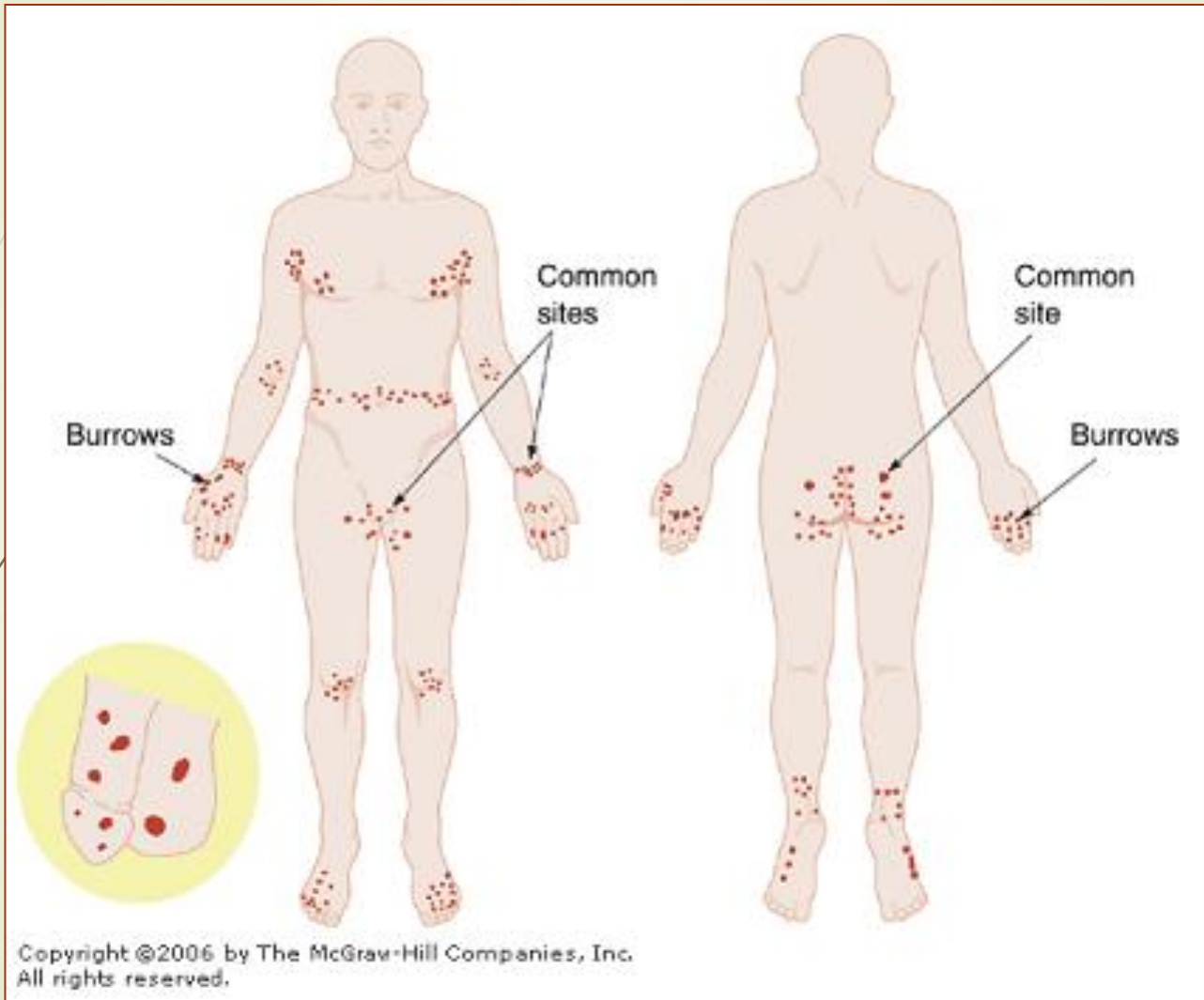
- Non sedatif : cetirizine, loratadine, desloratadine.



# Skabies

Penyakit kulit yang disebabkan oleh infestasi *Sarcoptes scabiei var. hominis*.

- Etiologi : *Sarcoptes scabiei var. hominis*
  - *St korneum – st granulosum*
- Penularan : kontak kulit langsung atau tidak langsung (kutu hidup 2 hari di kain)
- Faktor risiko
  - Asrama (hidup berkelompok)
  - Anak-anak
- Patogenesis
  - Reaksi hipersensitivitas tipe I dan IV.
- **Hypersensitivity of both immediate and delayed types** occurs in the development of lesions other than burrows. For pruritus to occur, sensitization to *S. scabiei* must take place. Among persons with their first infection, sensitization takes several weeks to develop; after reinfestation, pruritus may occur within 24 h.
- Inkubasi :
  - Sensitisasi 21 hari
  - Reinfeksi 1-3 hari





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**Crusted scabies: buttocks** An eczematous dermatitis on the buttock in a chronic care facility patient. Pruritus, may be mild, and the diagnosis of scabies missed for months, during which time staff and other patients become infested.





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**Burrow with *Sarcoptes scabiei* (female), eggs, and feces** Under a microscope, a mite at the end of a burrow with seven eggs and smaller fecal particles obtained from a papule on the webspace of the hand.

# Management

## PRINCIPLES OF TREATMENT

Infested individuals and close physical contacts should be treated at the same time, whether or not symptoms are present. Topical agents are more effective after hydration of the skin, i.e., after bathing. Application should be to all skin sites, especially the groin, around nails, behind ears, including face and scalp. Sexual partners and close personal or household contacts within last month should be examined and treated prophylactically.

## Decontamination of Environment


Bedding, clothing, and towels should be decontaminated (machine washed or machine dried using heat cycle or dry-cleaned) or removed from body contact for at least 72 h. Thorough cleaning of patient's room or residence.



## RECOMMENDED REGIMENS

*Permethrin 5% Cream* Applied to all areas of the body from the neck down. Wash off 8 to 12 h after application. Adverse events very low.

*Lindane (γ-Benzene Hexachloride) 1% Lotion or Cream* Applied thinly to all areas of the body from the neck down; wash off thoroughly after 8 h. Note: Lindane should not be used after a bath or shower, and it should not be used by persons with extensive dermatitis, pregnant or lactating women, and children younger than 2 years. Mite resistance to lindane has developed in North, Central, and South America and Asia. Low cost makes lindane a key alternative in many countries.



## ALTERNATIVE REGIMENS

*Crotamiton 10% Cream* Applied thinly to the entire body from the neck down, nightly for 2 consecutive nights; wash off 24 h after second application.

*Sulfur 2 to 10% in Petrolatum* Applied to skin for 2 to 3 days.

*Benzyl Benzoate 10% and 25% Lotions* Several regimens are recommended: swabbing only once; two applications separated by 10 min, or two applications with a 24-h or 1-week interval. 24 h after application, preparation should be washed off and clothes and bedding changed. The compound is an irritant and can induce pruritic irritant dermatitis, especially on face and genitalia.

*Benzyl Benzoate with Sulfiram* Several regimens are recommended: swabbing only once:

*Esdepallethrine 0.63%*

*Malathion 0.5% Lotion*

*Sulfiram 25% Lotion* Can mimic effect of disulfiram; no alcoholic drinks should be consumed for at least 48 h.

## INFANTS, YOUNG CHILDREN, PREGNANT/LACTATING WOMEN

Permethrin or crotamiton regimens or precipitated sulfur ointment should be used with application to all body areas. Lindane and ivermectin should not be used.

## **TREATMENT OF ECZEMATOUS DERMATITIS**

### **Antihistamines**

Systemic sedating antihistamine such as hydroxyzine hydrochloride, doxepin, or diphenhydramine at bedtime.

### **Topical Glucocorticoid Ointment**

Applied to areas of extensive dermatitis associated with scabies.

### **Systemic Glucocorticoids**

Prednisone 70 mg, tapered over 1 to 2 weeks, gives symptomatic relief of severe hypersensitivity reaction.

## **POSTSCABIETIC ITCHING**

Generalized itching that persists a week or more is probably caused by hypersensitivity to remaining dead mites and mite products. Nevertheless, a second treatment 7 days after the first is recommended by some physicians. For severe, persistent pruritus, especially in individuals with history of atopic disorders, a 14-day tapered course of prednisone (70 mg on day 1) is indicated.

## **SECONDARY BACTERIAL INFECTION**

Treat with mupirocin ointment or systemic antimicrobial agent.

# Cutaneous Larva Migran

Penyakit yang disebabkan oleh cacing tambang yang seharusnya hidup pada hewan,

Contohnya: *Ancylostoma braziliense*, *Ancylostoma caninum*, *Uncinaria stenocephala*, *Bunostomum phlebotomum*.

# Cutaneous larva migran = Creeping eruption

## ✗ Etiologi

+ *A. braziliense*, *A. caninum*, *S. stercoralis* (**Larva currens**)

## ✗ Patogenesis

+ Larva → st korneum-st granulosum : inflamasi eosinofilik → mati stl bbrp hari-bulan

## ✗ Ax. Gatal

+ Inkubasi : 1-6 hari

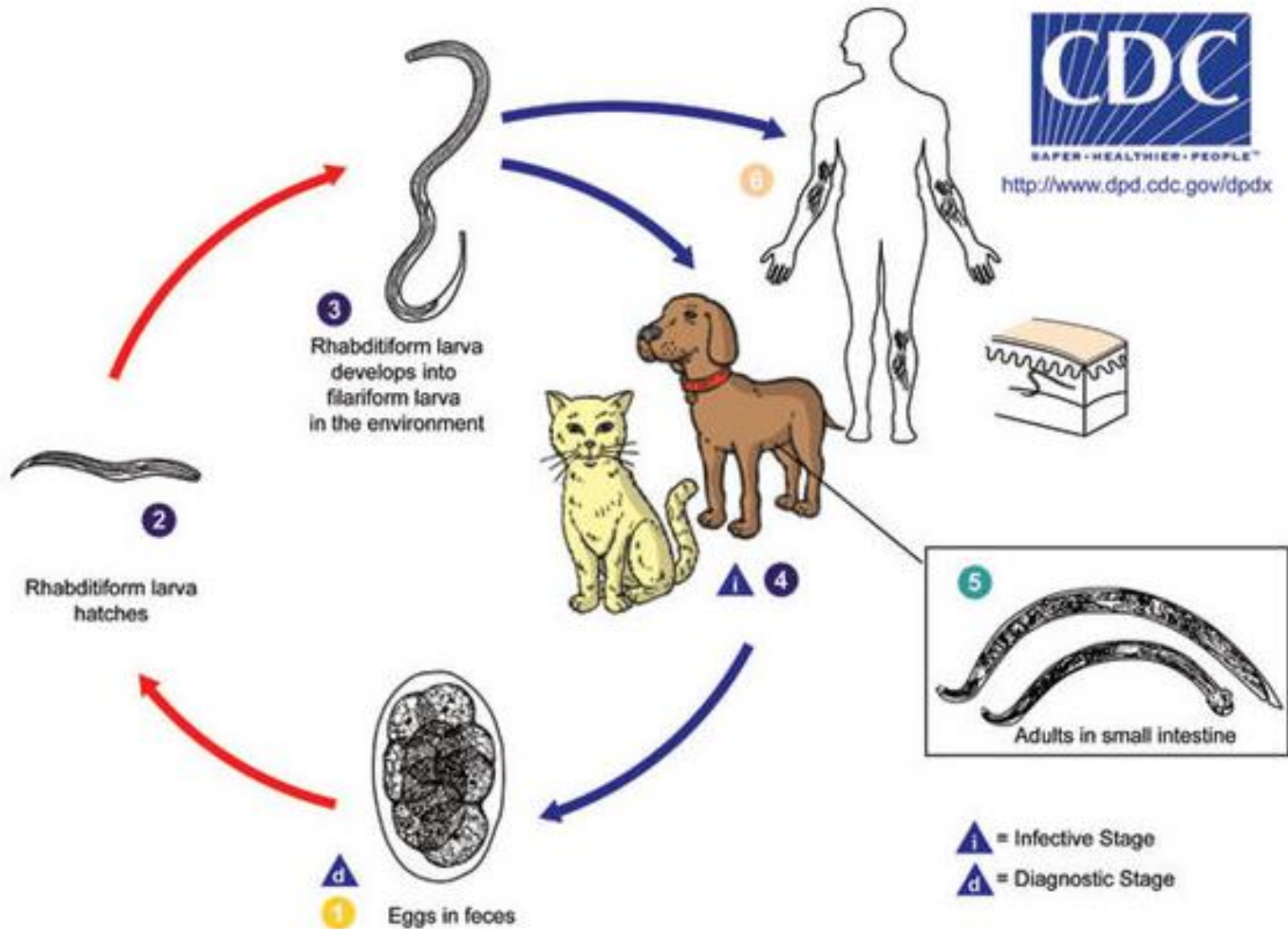
+ Durasi 2-8 mg, atau 2th

## ✗ Px. Kunikulus berkelok, eritem, vesikel-bula



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Kunikulus berkelok-kelok dg dasar eritem, bula





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**Larva currens** Multiple, pruritic, serpiginous, inflammatory lines on the buttocks at sites of penetration of *S. stercoralis* larvae.



✘ Faktor risiko

- + Kontak dg kucing/anjing
- + Bekerja/bermain di pasir, tanah

✘ Tx.

- + **Albendazole 1x400 mg selama 3 hari**
- + Albendazole krim 10%, dioleskan 3 x sehari, selama 7-10 hari
- + **(Tiabendazole 50mg/kgBB/hr selama 2-4 hari)**
- + (Ivermectin 2x6mg)
- + **Kortikosteroid topikal**
- + **Cryosurgery (liquid nitrogen)**



# Pedikulosis Kapitis & Pubis



# Pedikulosis

- infeksi kulit atau rambut pada manusia yang disebabkan oleh *Pediculus sp*
- parasit obligat artinya harus menghisap darah manusia untuk mempertahankan hidup.
  - Pedikulosis kapitis
  - Pedikulosis korporis
  - Pedikulosis pubis (Pthiriasis)



# Epidemiologi

- ✘ sering menginfeksi manusia
- ✘ Di Amerika Serikat sekitar 6-12 juta anak usia 3-11 tahun terinfeksi setiap tahunnya
- ✘ Di Turki mencapai 16,7 % atau sekitar 1.569 anak usia sekolah /tahun.
- ✘ Di Indonesia sendiri masih belum diketahui penyebarannya
- ✘ lebih banyak diderita oleh anak perempuan daripada laki-laki dengan frekuensi 2:1



# Faktor yg Berpengaruh

- faktor sosial-ekonomi,
- tingkat pengetahuan,
- higiene perorangan,
- kepadatan tempat tinggal, dan
- karakteristik individu (umur, panjang rambut, dan tipe rambut)
- faktor lingkungan yg terbatas

Pedikulosis kapitis merupakan penyakit tersering kedua setelah skabies yang khas terjadi di pesantren, hal ini berkaitan erat dengan perilaku & lingkungan di pesantren.



# Cara Penularan

- ✘ kontak langsung dengan penderita dan
- ✘ kontak dengan alat-alat yang dipakai oleh penderita (misalnya sisir, bantal, topi, dan penutup kepala (jilbab))

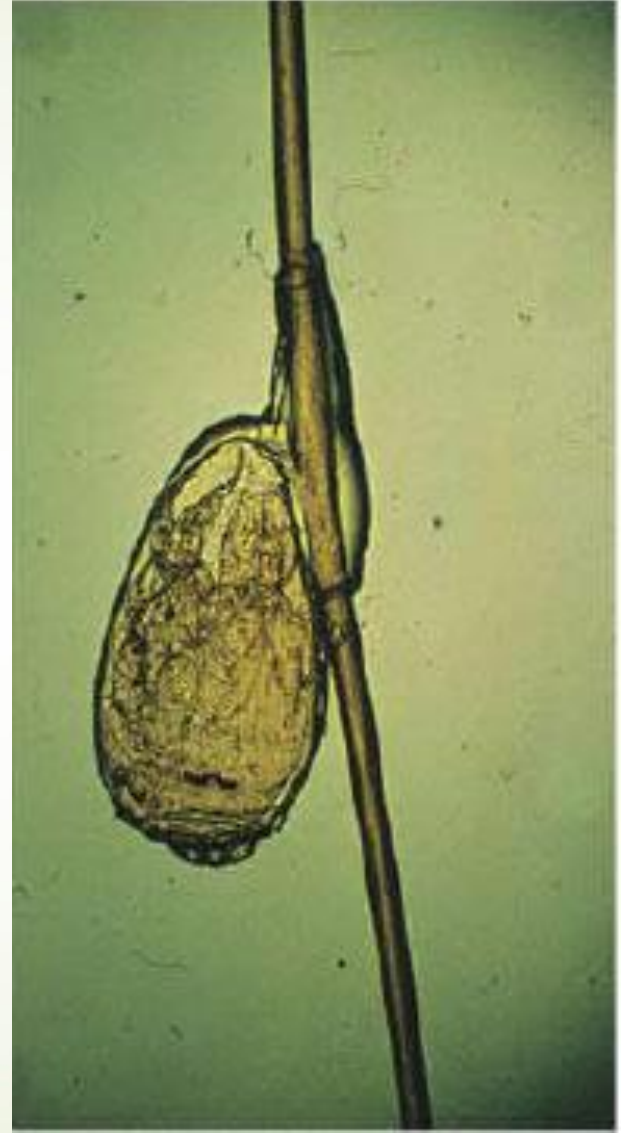
(Juanda, 2007).





# Keluhan dan Tanda

- Gatal, karena pengaruh air liur dan ekskreta dari kutu yang dimasukkan ke dalam kulit sewaktu menghisap darah. Air liur yang berfungsi untuk mencegah pembekuan darah, dan feses (Head louse, 2009)
- Rasa gatal pada daerah belakang kepala, temporal (bagian samping), dan post aurikular (belakang telinga) serta dapat meluas keseluruh kepala.
- Garukan → erosi, ekskorsiasi, dan infeksi sekunder → ditandai dengan adanya nanah dan kerak dan di sertai pembesaran kelenjar getah bening regional. → kepala memberikan bau busuk (Siregar, 2005).



## Skin Lesions

- *Papular urticaria* (small erythematous papules) at sites of feeding, especially periumbilical (Fig. 26-14); blisters.
- Secondary changes of *lichenification, excoriations*.
- *Secondary infection* detected in patients with significant pruritus.
- *Maculae ceruleae (taches bleues)* are slate-gray or bluish-gray macules 0.5 to 1 cm in diameter, irregular in shape, nonblanching (Fig. 26-15). Pigment thought to be breakdown product of heme affected by louse saliva.
- *Eyelash infestation* Serous crusts may be present along with lice and nits (Fig. 26-13); occasionally, edema of eyelids with severe infestation.



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**Pediculosis pubis: papular urticaria** At this magnification only inflammatory papules (sites of crab lice bites), which are extremely pruritic, are seen on the abdomen and the inner aspects of the thighs. Closer examination reveals nits on the pubic hairs.



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**Pediculosis pubis: maculae coeruleae (taches bleues)** Slate colored nonblanching macules on the buttocks sites of louse bites.



# Diagnosis

- Gatal
- Kutu
- Kutu dewasa, Telur atau nymph di rambut, < 1 cm dari kulit kepala



# Penatalaksanaan

- Individu : perilaku
- Lingkungan



# Pencegahan

- ▶ tingkat pengetahuan → belajar
- ▶ Kebersihan → sampo 1-2 hari sekali,
- **Luas lantai 4 m<sup>2</sup>/jiwa**
- ▶ Panjang rambut dijaga
- ▶ Saling meminjam alat, dicuci terlebih dahulu sebelum dipinjamkan atau dikembalikan

# Kamar

- Harus ada pergantian udara (jendela/ventilasi).
- Adanya cahaya sinar matahari pada siang hari yang dapat masuk ke dalam ruang/kamar (genteng/kaca).
- Penerangan yang memadai disesuaikan dengan luas kamar yang ada.
- Harus dalam keadaan bersih dan tidak lembab.
- Setiap ruang/kamar tersedia tempat sampah.
- Jumlah penghuni ruang/kamar sesuai persyaratan kesehatan.
- Ada lemari/rak di dalam kamar untuk penempatan peralatan, buku, sandal.





# Menjaga kesehatan individu

- Setiap individu harus membersihkan diri dengan cara mandi sedikitnya 2 kali sehari.
- Gunakan sabun mandi untuk menghilangkan kotoran dan kuman yang melekat di badan.
- Keramas cuci rambut 2 hari sekali atau sedikitnya dua kali dalam seminggu.
- Sikat gigi sedikitnya 2 kali sehari.
- Cuci tangan dengan sabun setiap kali selesai melakukan sesuatu kegiatan.
- Cuci pakaian dengan sabun setelah dipakai seharian.
- Cuci sarung bantal dan seprai dua kali dalam seminggu.
- Olah raga/senam secara teratur.
- Istirahat yang cukup.

# Management

## TOPICALLY APPLIED INSECTICIDES

Ideally, should have 100% activity against louse and egg. Malathion kills all lice after 5 min of exposure, and >95% of eggs fail to hatch after 10 min of exposure. Synthetic pyrethroids, synergized pyrethrins, and malathion are most efficacious and safe. Lotion preparations are preferred; creams, foams, gels are also available.

## RECOMMENDED REGIMEN

### Permethrin

Synthetic pyrethroid. Over-the-counter 1% products: Nix. 5% product: Elimite is prescription. Product applied to infested area(s) and washed off after 10 min. Not totally ovicidal; has residual activity; in that the incubation period of louse eggs is 6 to 10 days, should be reapplied in 7 to 14 days.

### Pyrethrin and Piperonyl Butoxide

Pyrethrins derived from extract of chrysanthemums. Products: RID Mousse, RID shampoo, A-200, R and C, Pronta, Clear Lice System.

### Malathion

0.5% in 78% isopropyl alcohol (Ovide). Applied to involved site for 8 to 12 h; binds to hair providing residual protection. Indicated in lindane-resistant cases. Should not be used in children younger than 6 months.

## **ALTERNATIVE REGIMEN**

### **Pyrethrins with Piperonyl Butoxide**

Applied to scalp and washed off after 10 min.

### **Lindane**

1% shampoo applied for 4 min and then thoroughly washed off. (Not recommended for pregnant or lactating women.) Not totally ovicidal and lacks residual activity; in that the incubation period of louse eggs is 6 to 10 days, the agents should be reapplied in 7 to 14 days. Retreatment may be necessary if lice are found or eggs are observed at the hair-skin junction.

### **Ivermectin**

0.8% lotion or shampoo.



## **SYSTEMIC THERAPY**

### **Oral Ivermectin**

200 µg/kg; repeat on day 10 to kill emerging nymphs.

## **ACQUIRED RESISTANCE TO INSECTICIDES**

Occurs worldwide, mainly to pyrethrins and pyrethroids; also to malathion. If resistance is suspected, an alternative agent should be used. Other alternatives include newer insecticides and oral ivermectin in cases of resistance to both pyrethroids and malathion.

- 
- 
- Spinosad 0.9% suspension (Natroba) was approved by the FDA in 2011 for the treatment of head louse infestation in patients aged 4 years and older. The product is applied to dry hair as a cream rinse, left in for **10 minutes**, and then shampooed out. Spinosad is derived from soil bacteria and has ovicidal activity. Retreatment is necessary only if live (ie, crawling) lice are seen 1 week after the first treatment. [32]
  - In February 2012, topical 0.5% ivermectin (Sklice) was approved in the United States as a single-dose, 10-minute application without the need for nit combing in individuals aged 6 months or older. Although it is not ovicidal, it appears to prevent nymphs from surviving.

# Pengobatan

- ✘ Antikutu : (zat mexachlororyclohexane 0,5%) → 1 malam, ditutup handuk;
- ✘ Permetrin 1% → 10 menit, ditutup handuk; ulang 1 mg kemudian
- ✘ Sampo pada pagi harinya
- ✘ Dilakukan bersama-sama penghuni sekamar/seasrama.

## DECONTAMINATION OF ENVIRONMENT

- ✘ Bedding and clothing should be decontaminated (machine-washed or machine-dried using heat cycle or dry-cleaned) or sealed in a plastic bag for 2 weeks.

## **Management**

Bedding and clothing must be systematically decontaminated.

### **HYGIENE MEASURES**

Basic sanitation measures, and hygiene measures to assure changes of clean clothing, body washing, and sometimes shaving.

### **DELOUSING**

Pyrethrins/pyrethroids or malathion for 8 to 24 h is recommended in some cases. Outbreaks necessitate delousing of individuals with 1% permethrin dusting powder.

### **LOUSE-BORNE INFECTIONS**

Antibiotics are indicated if louse-borne infectious disease (trench fever, epidemic typhus) exists.



Perempuan 28 th, mengeluh nyeri dan sedikit gatal pada lengan kanan, sejak 3 hari yg lalu.

**Apakah diskripsi lesi?**

**Apakah Dx?**

**Terapi ?**



# Filariasis

Penyakit yg disebabkan oleh parasit family Filariidae.



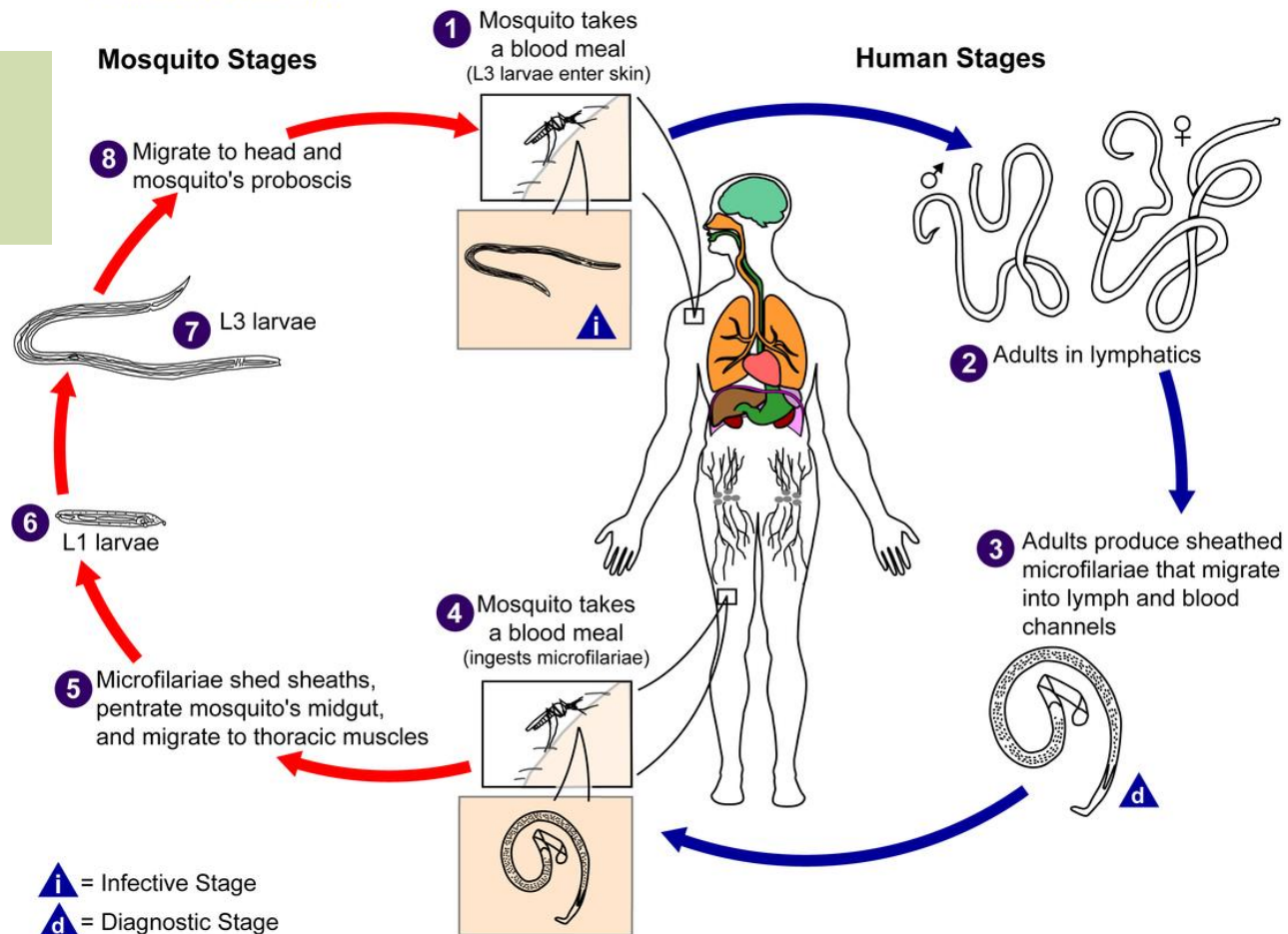
# Patogenesis

*Aedes, Anopheles, Culex, or Mansonia*

## Filariasis

(*Wuchereria bancrofti*)

*B timori,*  
*B malayi,*  
*W bancrofti.*




# Gejala & Tanda

- Symptoms of filariasis are dependent on species and body type and can be acute or chronic in nature. Up to 70% of infected individuals remain asymptomatic.
- The clinical course of lymphatic filariasis is broadly divided into the following:
  1. **Asymptomatic microfilaremia** - Patients with microfilaremia are generally asymptomatic, although those with heavy microfilarial loads may develop acute and chronic inflammatory granulomas secondary to splenic destruction. Passage of cloudy milklike urine may denote chyluria.
  2. **Acute phases of adenolymphangitis (ADL)**
  3. **Chronic, irreversible lymphedema.**



# Prognosis

- The prognosis in filariasis is good if infection is recognized and treated early. Filarial diseases are rarely fatal, but the consequences of infection can cause significant personal and socioeconomic hardship for those who are affected.
  - The morbidity of human filariasis results mainly from the host reaction to microfilariae or developing adult worms in different areas of the body. Long-term disability may result from chronic lymphatic damage or blindness, depending on the infectious filarial organism
- 


Lymphatic filariasis symptoms predominantly result from the presence of adult worms residing in the lymphatics. They include the following:

- Fever
- Inguinal or axillary lymphadenopathy
- Testicular and/or inguinal pain
- Skin exfoliation
- Limb or genital swelling



# Terapi

- ▶ In 1997, WHO initiated the Global Program to Eliminate Lymphatic Filariasis (GPELF) with a goal to globally eliminate lymphatic filariasis as a public health problem by 2020. [2, 30]
- ▶ This initiative utilizes mass drug administration (MDA) in 60 countries at risk to reduce prevalence levels to a point at which transmission is no longer sustainable.
- ▶ The effort has led to a prevalence reduction in 15 countries thus far. [2] Overall, MDA strategies have differed both in their drug regimen and frequency.
- ▶ Traditionally, annual mass treatment with albendazole plus ivermectin or DEC has been used to interrupt the transmission of *W bancrofti*.
- ▶ Another study demonstrated that a 3-drug regimen (DEC, albendazole, ivermectin) resulted in better outcomes and fewer adverse events than therapy with DEC and albendazole alone

- 
- Mutidrug regimens (MDR) : albendazole plus ivermectin atau DEC
  - Diethylcarbamazine (DEC) 6 mg/kg selama 12 hari
    - Day 1: 50 mg PO PC
    - Day 2: 50 mg PO TID
    - Day 3: 100 mg PO TID
    - Day 4-14: 6 mg/kg/day PO divided TID
  - Doxycycline (200 mg/hari) selama 6 minggu
  - Ivermectin 6 mg PO as single dose
  - Steroids can be used to soften and reduce the swelling of lymphedematous tissues



## Surgery

- Large hydroceles and scrotal elephantiasis can be managed with surgical excision.

## Diet and activity

- Fatty foods are restricted in individuals with proven chyluria
- chronic lymphatic filariasis are encouraged to mobilize (with compression bandage support and regular exercise) the affected limb and to elevate it at night.



# Pencegahan

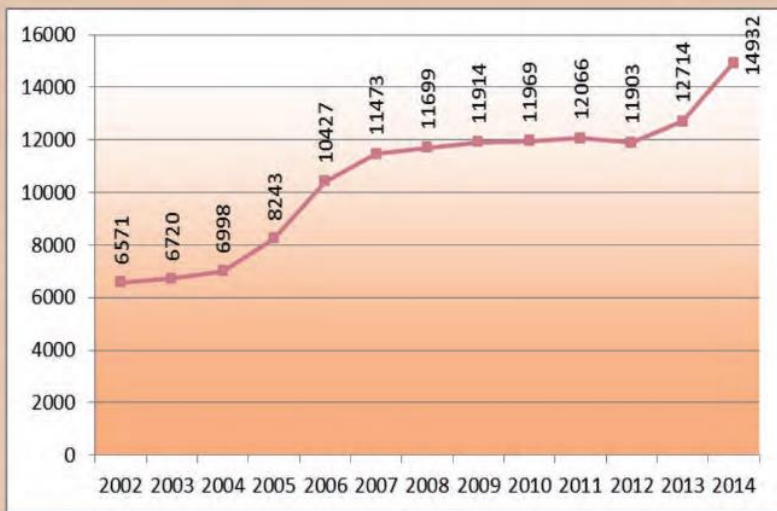
- Avoidance of bites from insect vectors is usually not feasible for residents of endemic areas, but visitors to these regions should **use insect repellent** and **mosquito nets**.
- As noted above, **mass drug administration** programs are the backbone of the goal to reduce prevalence rates to a point at which transmission is no longer sustainable.





Bagaimana di Indonesia?

**Gambar 1.**  
Kasus Filariasis Klinis per Tahun di Indonesia Tahun 2002 - 2014



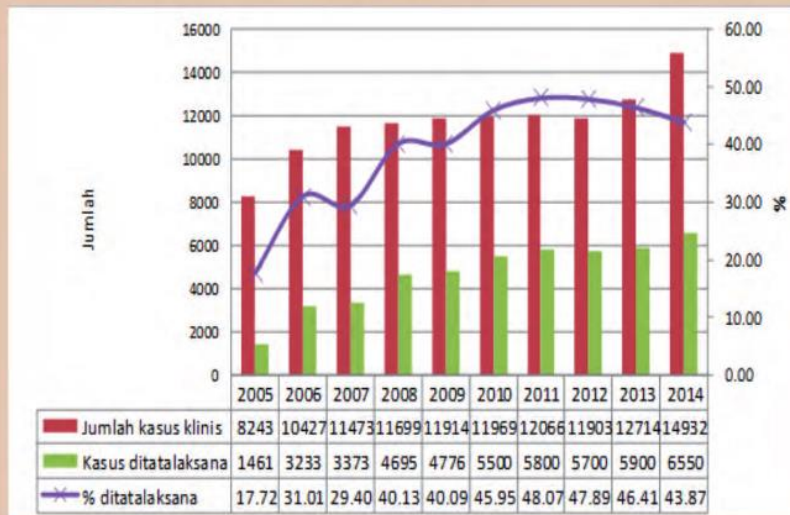
Sumber: Subdit Filariasis dan Kecacingan, Direktorat PPBB, Ditjen PP dan PL

**Gambar 3**  
Daerah Endemis per Kabupaten/Kota di Indonesia



Sumber: Subdit Filariasis dan Kecacingan, Direktorat PPBB, Ditjen PP dan PL

**Gambar 5**  
Kasus Filariasis Klinis yang Ditatalaksana Tahun 2005-2014

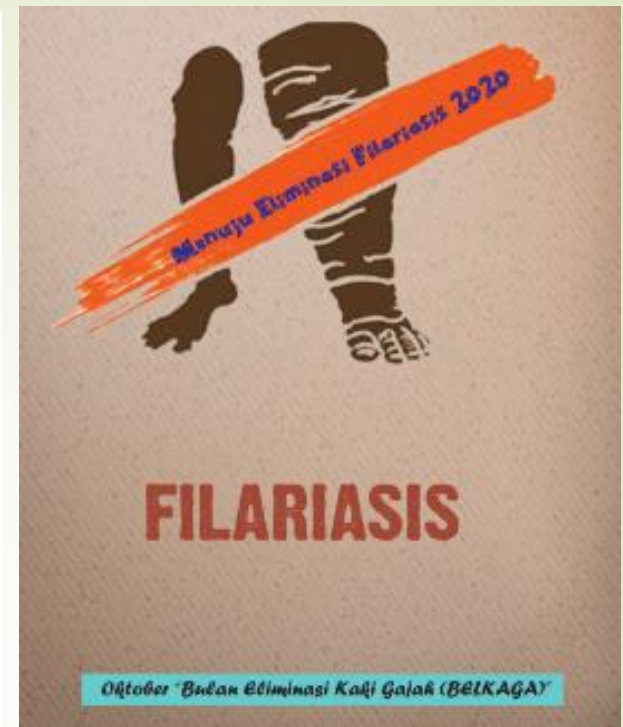


Sumber: Subdit Filariasis dan Kecacingan, Direktorat PPBB, Ditjen PP dan PL




MENTERI KESEHATAN  
REPUBLIK INDONESIA


PERATURAN MENTERI KESEHATAN REPUBLIK INDONESIA  
NOMOR 94 TAHUN 2014  
TENTANG  
PENANGGULANGAN FILARIASIS  
DENGAN RAHMAT TUHAN YANG MAHA ESA  
MENTERI KESEHATAN REPUBLIK INDONESIA,



- a. Surveilans Kesehatan;
- b. Penanganan Penderita;
- c. Pengendalian faktor risiko; dan
- d. Komunikasi, informasi, dan edukasi.



Untuk mempercepat terwujudnya Indonesia Bebas Kaki Gajah diadakan Bulan Eliminasi Kaki Gajah (BELKAGA) setiap bulan Oktober selama 5 tahun (2015-2020) yaitu:

1. Bulan dimana setiap penduduk kabupaten/kota endemis Kaki Gajah serentak minum obat pencegahan.
  2. Dilaksanakan setiap bulan Oktober selama 5 tahun berturut-turut (2015-2020)
  3. Dicanangkan tanggal 1 Oktober 2015 di Cibinong, Kabupaten Bogor, Jawa Barat. Pada saat yang bersamaan di provinsi endemik lainnya dilakukan pencanangan oleh Gubernur maupun Bupati/Walikota.
  4. BELKAGA menjadi tanggung jawab pemerintah pusat dan pemerintah daerah. Pelaksanaannya memerlukan dukungan kementerian dan lembaga terkait.
- 

(1) Pada **semua penduduk di wilayah endemis Filariasis** wajib dilakukan POPM Filariasis.

(2) Penduduk sebagaimana dimaksud pada ayat (1) meliputi penduduk sasaran **usia 2 tahun sampai dengan usia 70 tahun**.

POPM Filariasis tidak dilakukan atau ditunda pemberiannya terhadap:

- a. ibu hamil;
- b. penderita gangguan fungsi ginjal;
- c. penderita gangguan fungsi hati;
- d. penderita epilepsi;
- e. penderita penyakit jantung dan pembuluh darah;
- f. penduduk yang sedang sakit berat;
- g. penderita Filariasis klinis kronis sedang mengalami serangan akut; dan/atau
- h. anak dengan marasmus atau kwasiorkor.

Tabel 6. Stadium Limfadema

	Gejala	Stadium 1	Stadium 2	Stadium 3	Stadium 4	Stadium 5	Stadium 6	Stadium 7
1	Bengkak di kaki	menghilang waktu bangun tidur pagi	menetap	menetap	menetap	menetap dan meluas	menetap dan meluas	menetap dan meluas
2	Lipatan kulit	tidak ada	tidak ada	dangkal	dangkal	dalam, kadang dangkal	dangkal, dalam	dangkal, dalam
3	Nodul	tidak ada	tidak ada	tidak ada	ada	kadang-kadang	kadang-kadang	kadang-kadang
4	<i>Mossy lesions</i> *)	tidak ada	tidak ada	tidak ada	tidak ada	tidak ada	ada	kadang-kadang
5	Hambatan berat	tidak	Tidak	tidak	Tidak	tidak	tidak	ya

\*) Gambaran seperti lumut

## 1. Pengobatan Penderita Filariasis

Setiap penderita Filariasis klinis di daerah endemis maupun daerah non endemis mendapatkan pengobatan sebagai berikut :

- a. Pengujian masih hidup (positif) atau sudah matinya cacing filaria, baik dengan pengujian mikroskopis mikrofilaria, maupun pengujian antigen (ICT).
- b. Pada penderita Filariasis klinis positif, diberikan DEC 3 x 1 tablet 100 mg selama 12 hari berturut-turut dan parasetamol 3 x 1 tablet 500 mg dalam 3 hari pertama untuk orang dewasa. Dosis anak disesuaikan dengan berat badan. Pengawasan kejadian ikutan pasca pemberian obat perlu dilakukan dengan ketat.
- c. Penderita Filariasis klinis dengan serangan akut atau penderita Filariasis kronis yang sedang mengalami serangan akut, harus diobati terlebih dahulu serangan akutnya sesuai jenis serangan akut yang dialaminya, demikian juga terhadap infeksi sekunder.
- d. Apabila penderita berada di daerah endemis, maka pada tahun berikutnya baru boleh diikuti sertakan dalam POPM Filariasis dengan DEC dan albendazole sekali setahun minimal 5 tahun secara berturut-turut. Penderita yang tinggal di daerah non endemis, tidak perlu mendapat obat sebagai bagian dari pelaksanaan POPM Filariasis.

# POPM

Kombinasi tablet :

Diethylcarbamazine (DEC) 100 mg dan tablet Albendazole 400 mg.

Dosis untuk usia 2-5 tahun adalah 1 tablet DEC dan 1 tablet Albendazole;

Usia 6-14 tahun mendapat 2 tablet DEC dan 1 tablet Albendazole; dan

Bagi yang berusia di atas 14 tahun mendapat 3 tablet DEC dan 1 tablet Albendazole.





Do'a  
Penutup  
Majelis

**Subhaanakallohmma  
wabihamdika**  
asyhadu anlaa ilaaha illa anta  
astaghfiruka wa atuubu ilaika



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Unggul & Islami