Ocular Leprosy

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Neglected Tropical diseases (NTD's)

- **Leprosy**
- **Trachoma**
- **Oncocerciasis**
- Lymphatic filariasis (elephantiasis)
- Soil transmitted Helmints
- Schistosomiasis (Bilharzia)

Leviticus 13: melaatsheid

…… **roepen ‘’onrein, onrein”!**

Zolang de ziekte duurt blijft hij onrein;

<u>in afzondering moet hij leven…….</u>

Rembrandt (1656): Christus geneest de leproos
(Lukas 17 vs 12-14)

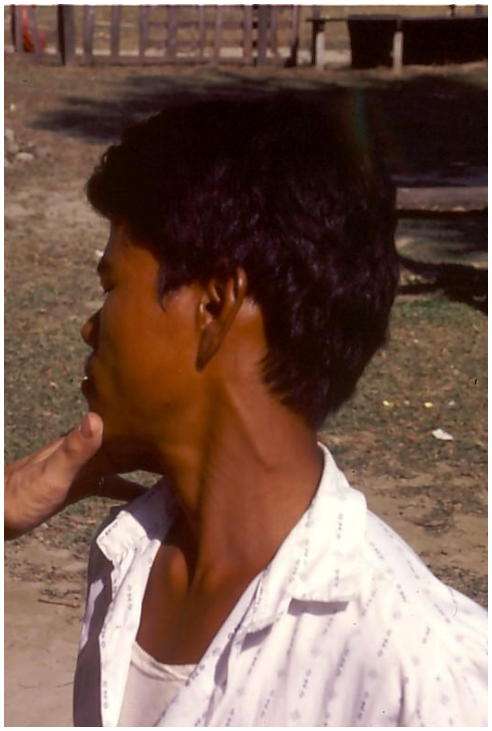


Leprosy: Infection by ***mycobacterium Leprae***

Skin & nerve disease:

- Anaesthetic pale patches
- Enlarged nerves
- Positive skin smear





Source of infection: Infected person

Airborne,
via nasal secretions,
(compare TB): acid fast rod

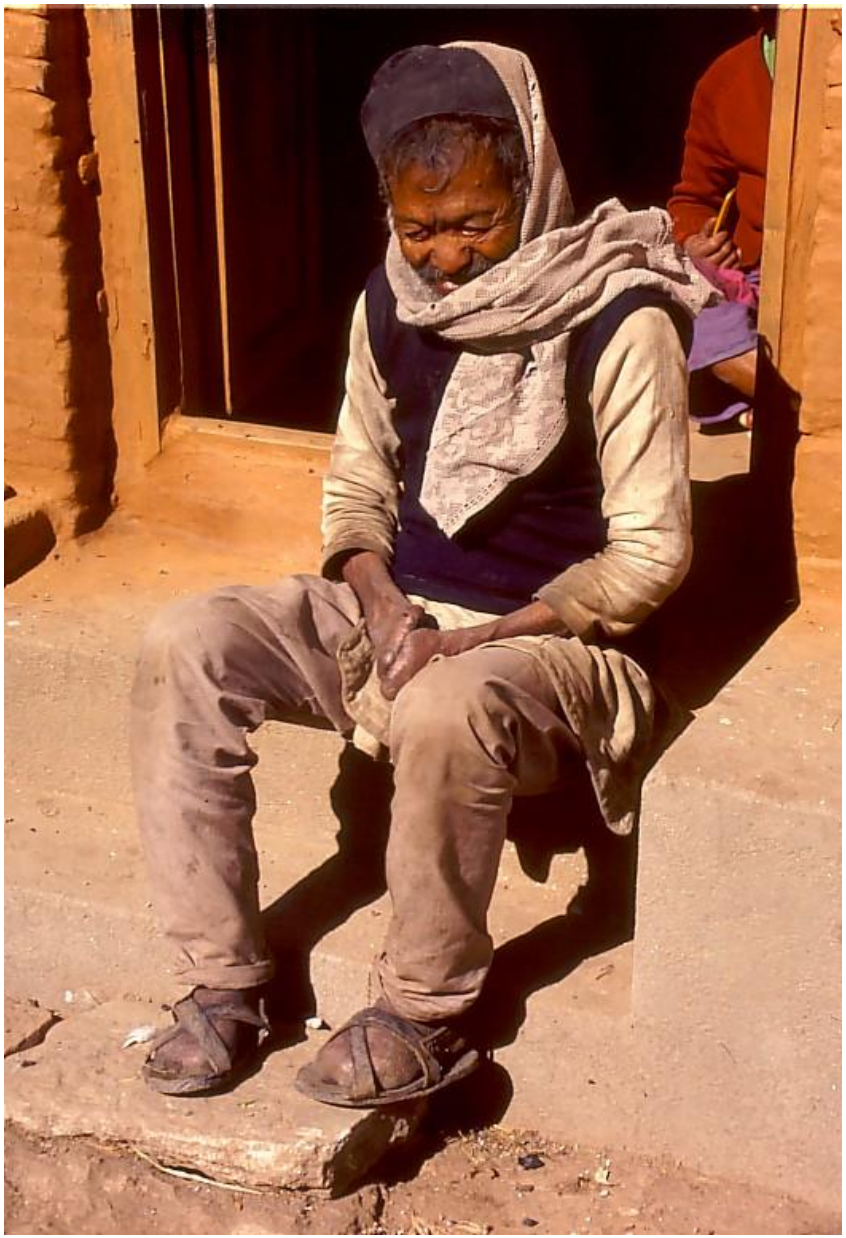




Source of infection:

- Untreated / unrecognized Multibacillary patient

- **Not** severely handicapped patient with burned out disease.



Exposure to leprosy bacilli

⇓

Subclinical infection ⇒ healing

⇓

Indeterminate disease ⇒ healing

⇓

Clinical leprosy

⇓

PB — Paucibacillary — TT BT

MB — Multibacillary — BB BL LL



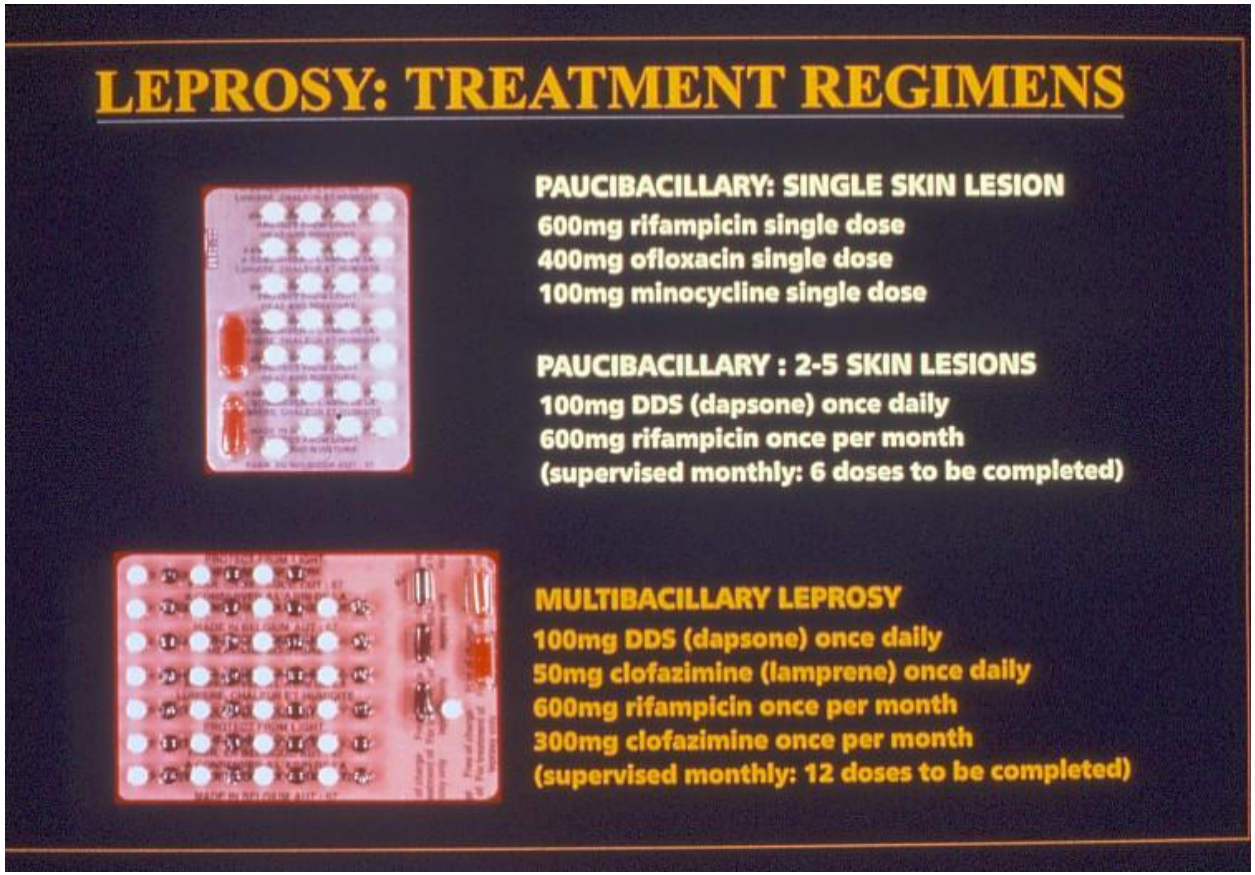
Indeterminate disease





PB leprosy

MB leprosy



FREE OF CHARGE: (Novartis)

PB single lesion MDT*:	single dose ROM
PB MDT:	6 months
MB MDT:	12 months

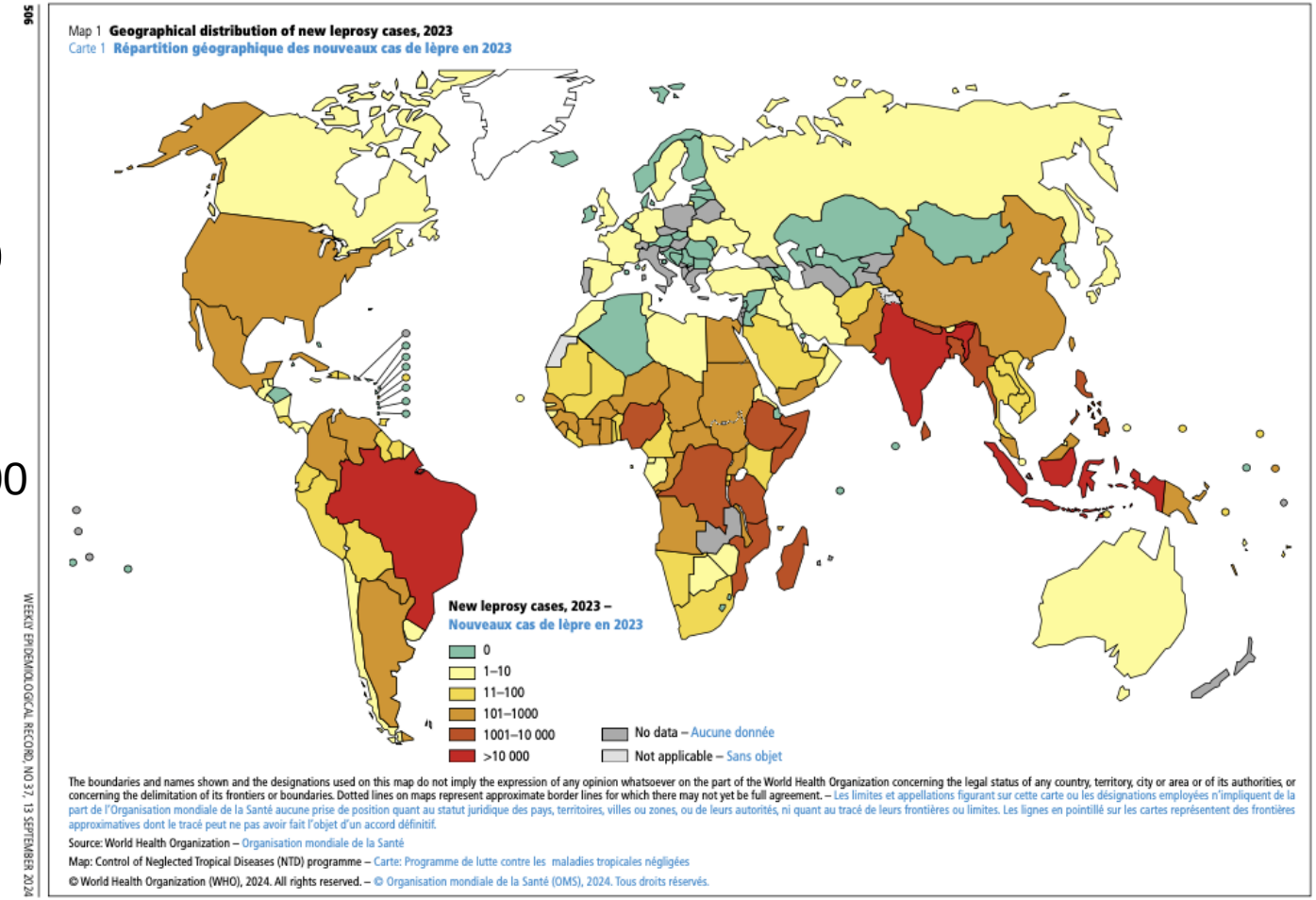
*multiple drug treatment

Geographic distribution of newly detected leprosy cases in 2023

India: 108 000

Brasil: 26 000

Indonesia: 14 000



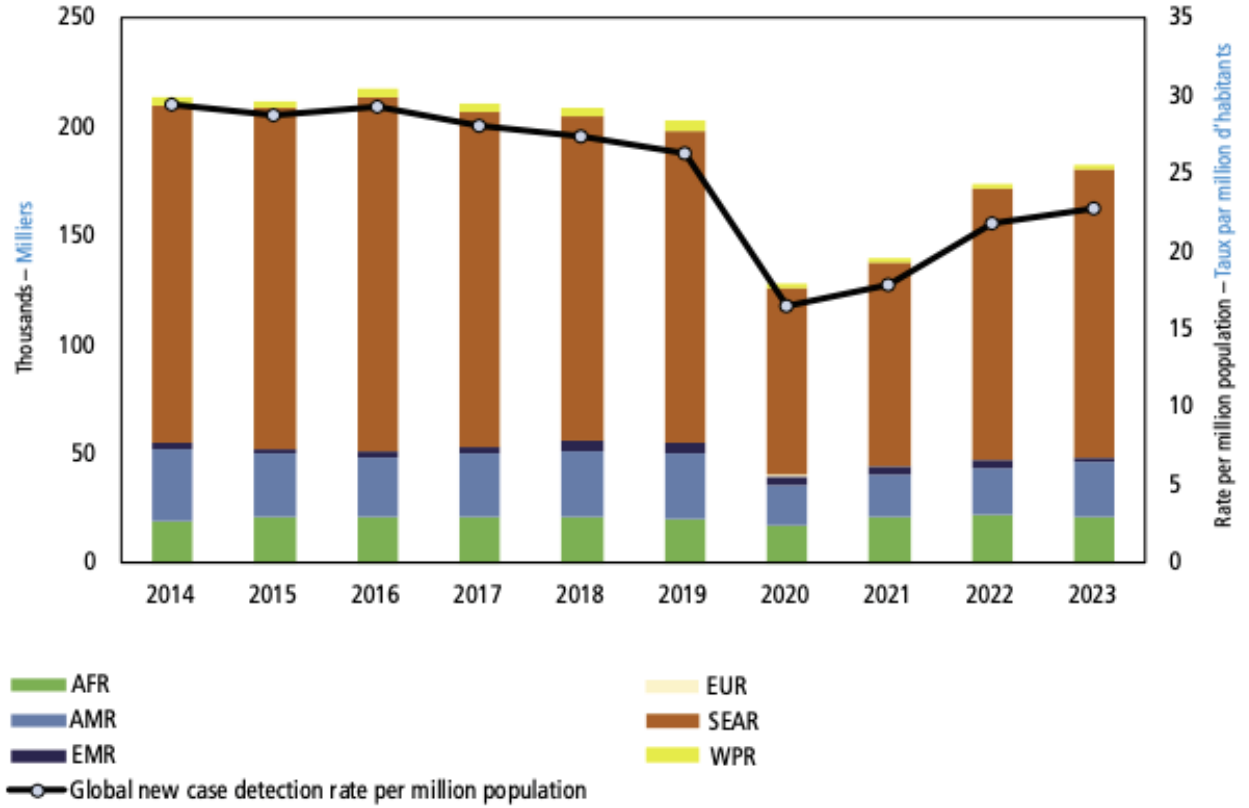
Total detected: 183 000 cases

dark red: > 10 000 newly detected cases / year

dark brown: 1000 - 10 000 newly detected cases / year

Trends in new leprosy cases detection by WHO Region

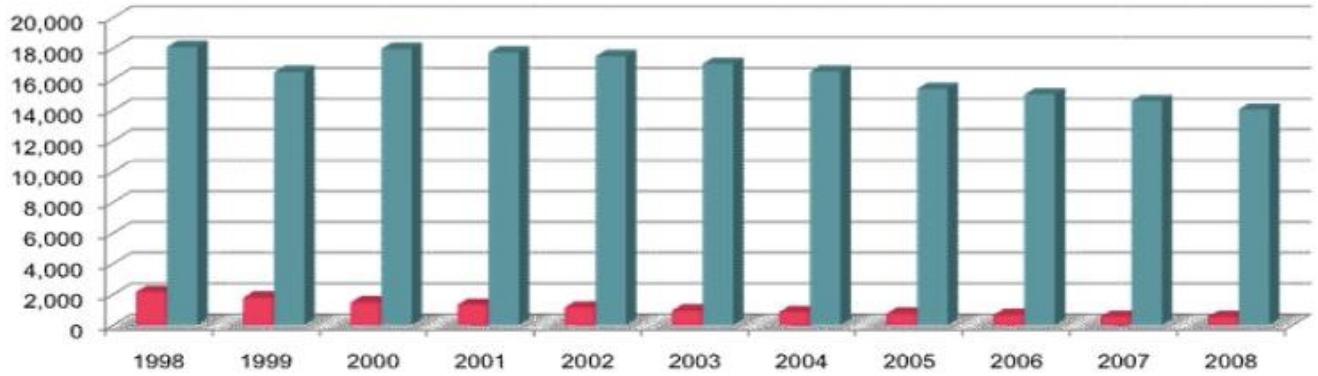
Figure 2 **Trends in new leprosy case detection with corresponding new case detection rates, by WHO Region, 2014–2023**
Figure 2 **Évolution du nombre et du taux de nouveaux cas de lèpre détectés, par Région OMS, 2014-2023**



AFR = African Region; AMR=Region of the Americas; EMR=Eastern Mediterranean Region; EUR=European Region; SEAR=South-East Asia Region; WPR=Western Pacific Region. – AFR = Région africaine; AMR = Région des Amériques; EMR = Région de la Méditerranée orientale; EUR = Région européenne; SEAR = Région de l'Asie du Sud-Est; WPR = Région du Pacifique occidental

5% increase compared to 2022

Newly detected patients vs people with disabilities due to leprosy



- Number of newly detected cases declining steadily:

- Large number of people with leprosy related disabilities in need of rehabilitation / care

VIETNAM

Leprosy in the Netherlands

- 300 – 400 ex leprosy patients (2010)
- 2-5 new patients/ year (immigrants)
- 1.8 yr delay before diagnosis
- Leprosy patients treated within department for tropical diseases / dermatology

- **2023: 2 new patients**
- **2023:** Suriname 21

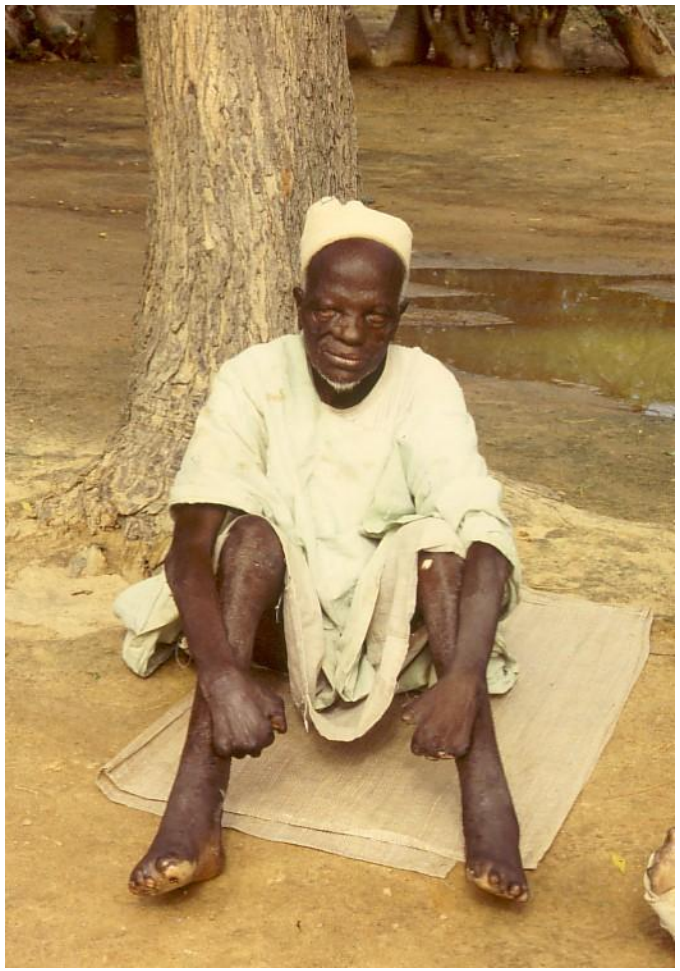
Complications in leprosy due to: loss of sensation & paralysis

1. Feet
2. Hands
3. **Eyes**

Disabilities due to:

immune reactions

infiltration & atrophy



Blindness in leprosy







A DISASTER!

Vision is essential to protect hands and feet, in case of loss of sensation!!!

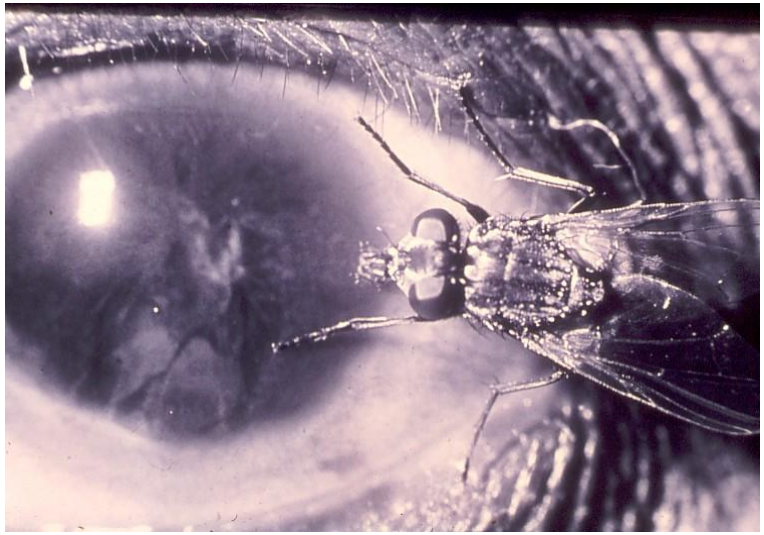


Blindness & Eye complications in Leprosy

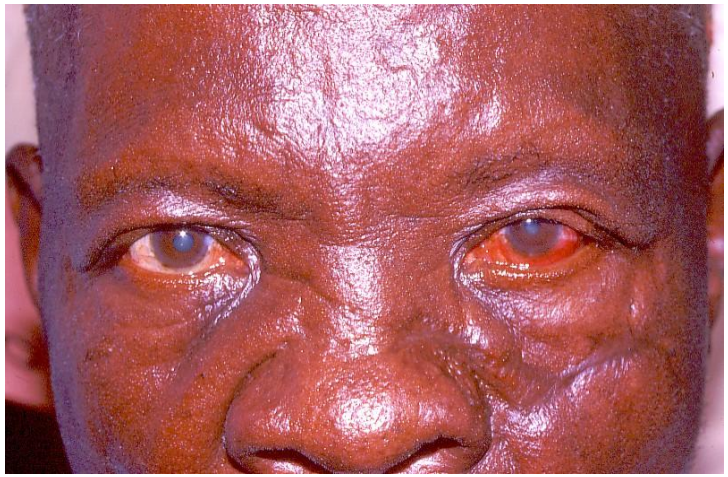
- In newly diagnosed patients: few
- In ulcer wards: more
- **In leprosy villages / colonies: Most: > 10% blindness!**

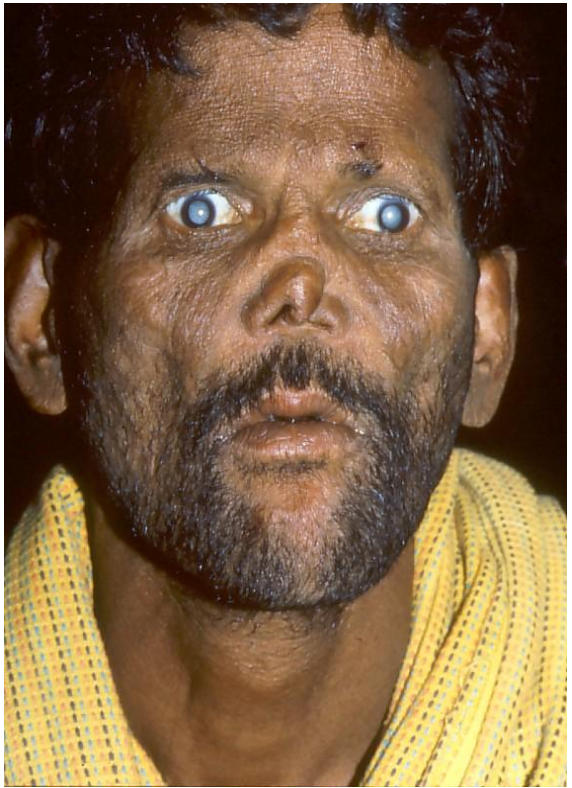
  (patients with multiple disabilities)

4 potentially sight threatening lesions in leprosy









Lagophthalmos



In leprosy endemic countries:

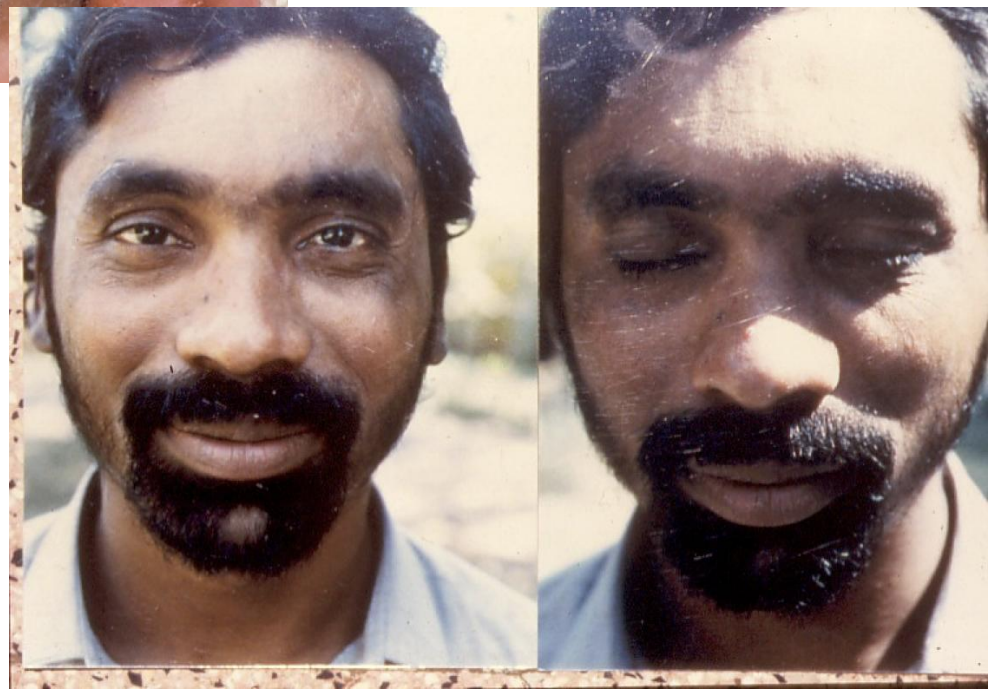
Include leprosy in DD of lagophthalmos

- Look at hands/ feet
- Ask for previous treatment of leprosy
- Patients don’t tell!



Facial patch in reaction with lagophthalmos

After prednisolon



Lag.: conservative treatment

- duration > 6 months
- lid gap < 6 mm
- cornea not exposed
- normal corneal sensitivity:

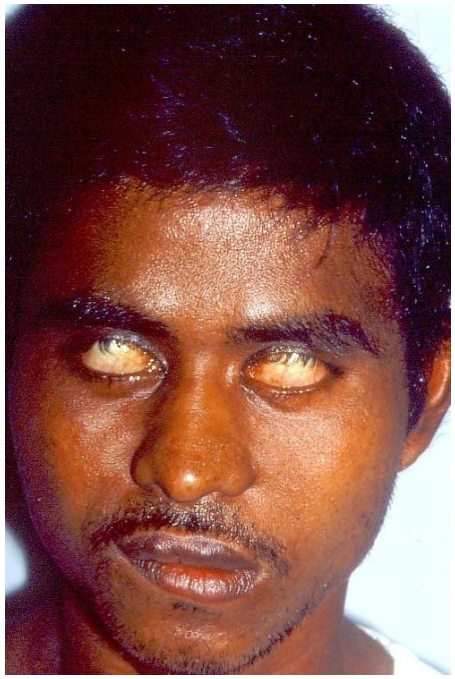
➢ sunglasses / hat
➢ think blink &
  blinking exercises
➢ artificial tears(?)



Surgical Lagophthalmos treatment

- exposure keratitis
- lid gap > 6 mm
- corneal anaesthesia
- cosmetic reasons



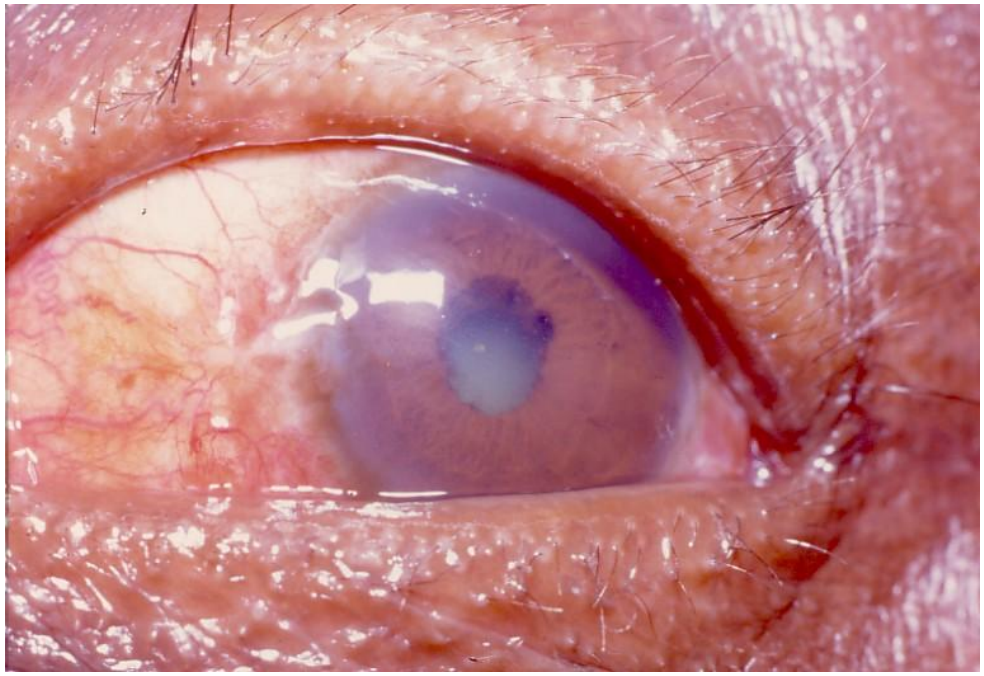








Acute red eye in leprosy



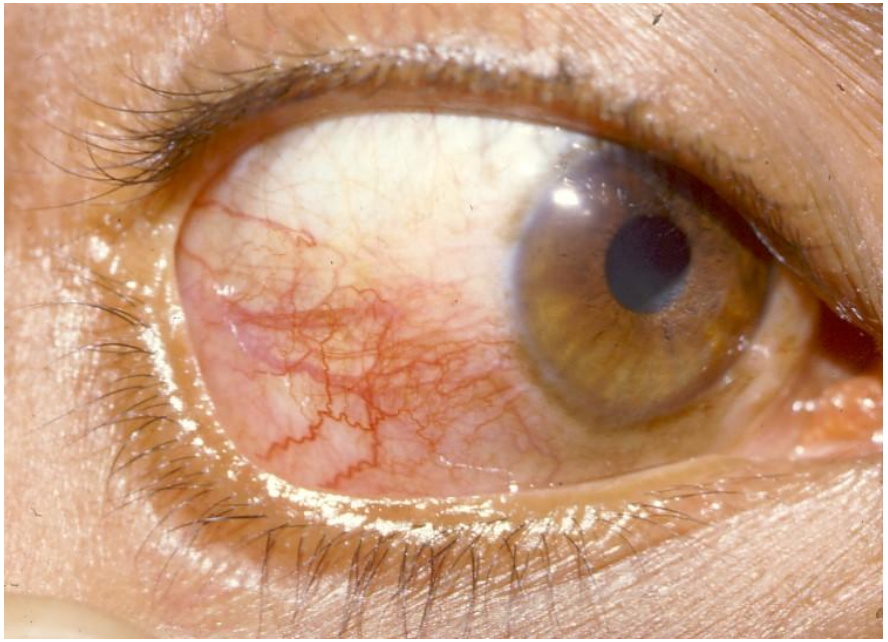
In leprosy endemic countries:

DD Acute iritis: LEPRA!

- Rx iritis as usual
- Referral to leprosy Drs.

DD (epi) scleritis: LEPRA!

- Rx as usual
- Referral to leprosy Drs



Late complications MB leprosy: infiltration & sec. atrophy:



Madarosis & collaps of nose



Pin point pupil

Prevention by early diagnosis & MDT

Reduction in eye complications

- Effective MDT
- Earlier presentation
- Better management of lepra reactions
- Better treatment of eye complications

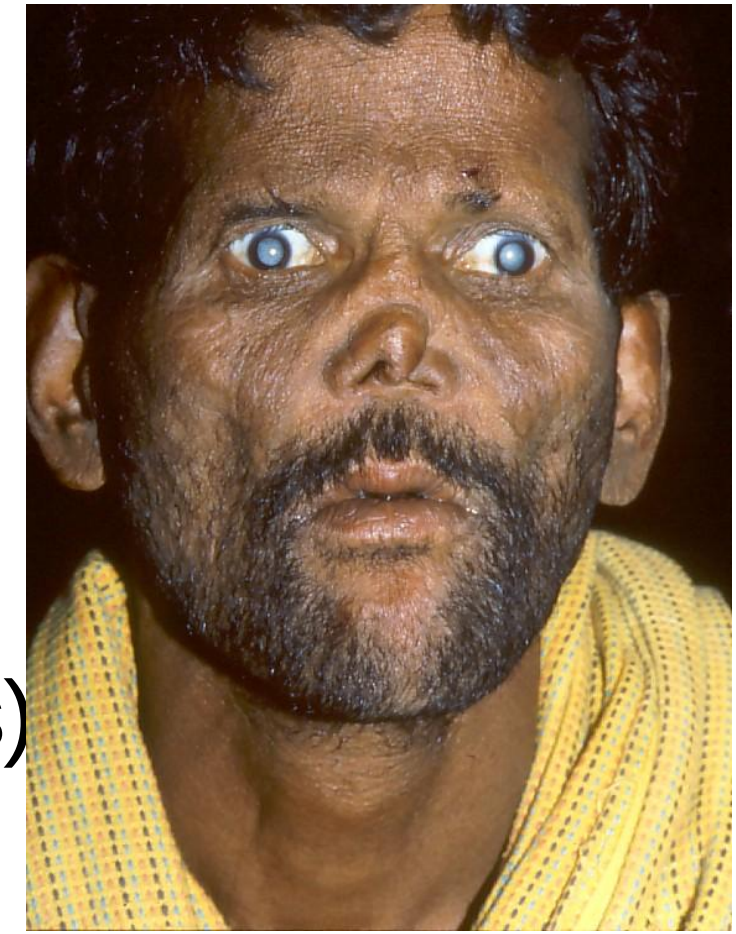


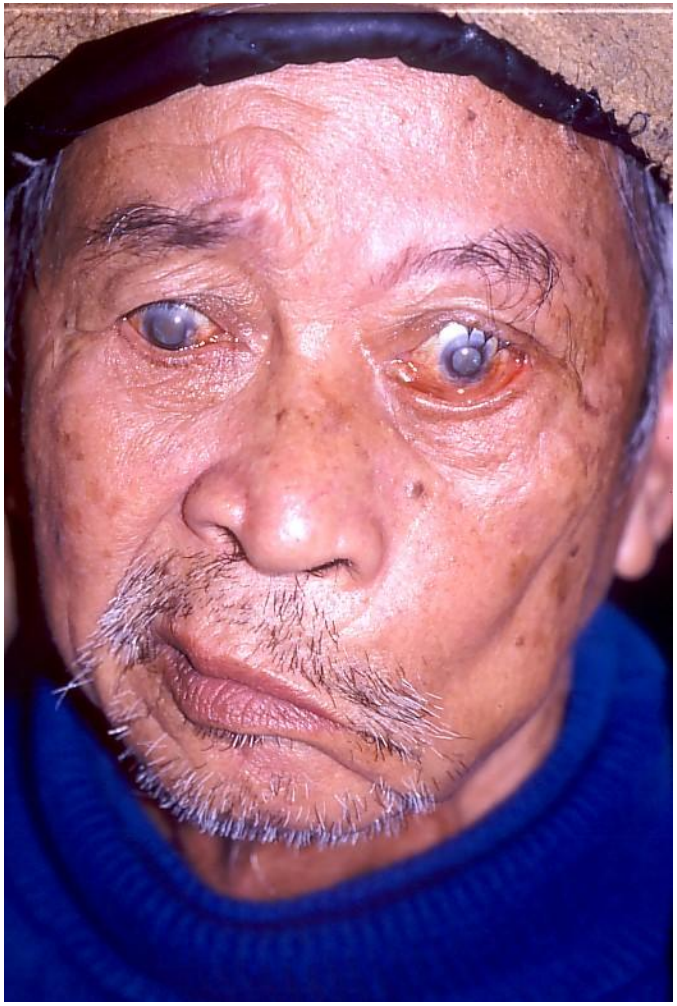
Cataract: > 50 % blindness in Leprosy

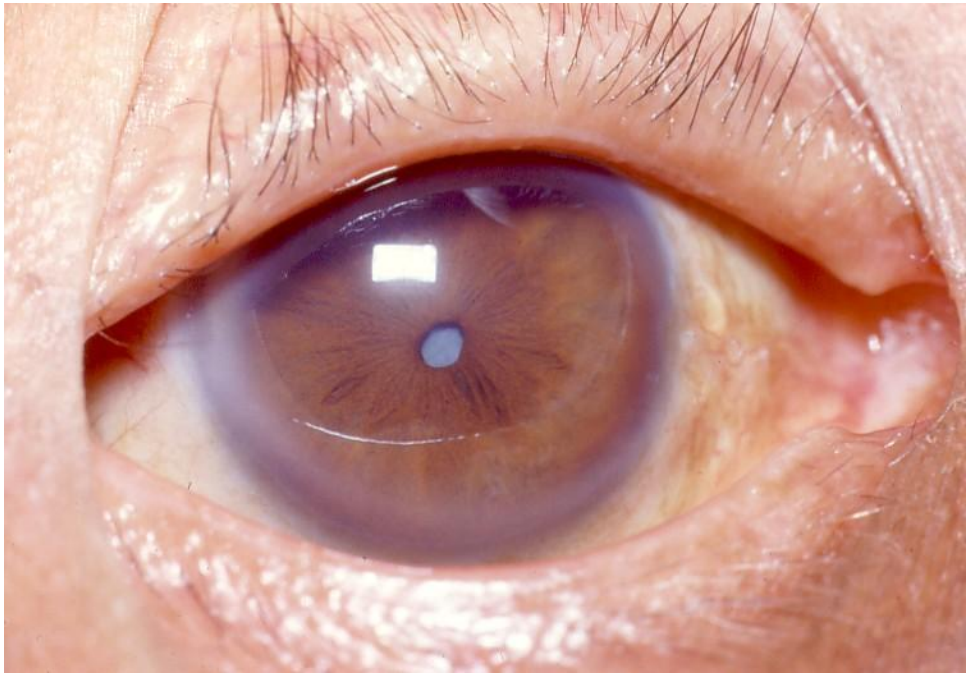
Age related +++

- Some secondary
  to steroid use / iritis

- IOL: good results
  (prolonged topical steroids)







Cataract and pinpoint pupil

Cataract & lagophthalmos

Why are these patients not operated?

- Stigma
- Poverty
- Poor mobility
- Distance to facility



Barriers to cataract surgery by provider

- No inclusion of leprosy settlements in outreach



- Not willing to admit manifest leprosy patients in hospital, due to stigma

- Fear for infection: ulcers

Eye study Nazareth Leprosarium (Tanzania) 2021

- 88 patients examined
- 19 patients (22%) blind <3/60, better eye)
- Cause: cataract in 9 patients

- Leprosarium located at general Mission hospital with eye department!

Lessons learned

- New leprosy patients worldwide stable
- Disabled leprosy patients >>> new patients
- Blindness in leprosy worse, because of anaesthesia in hand & feet
- Cataract most common cause of blindness in leprosy; to include settlements in outreach programmes!
- Leprosy also in the Netherlands

What can you do?

Include leprosy patients in any cataract surgical outreach programme, including the leprosy settlements!

Help to reduce the stigma!

Sunday 26 January 2025: World Leprosy Day

Nederlandse Lepra Stichting (NSL)
https://www.leprastichting.nl/

Lepra Zending
https://www.leprazending.nl/

