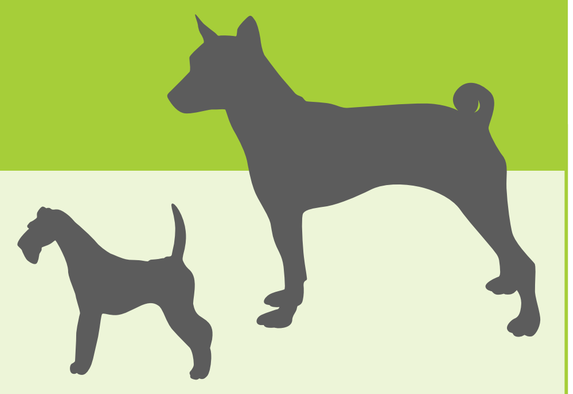
PREVENTION OF RABIES IN HUMANS

RABIES IS 100% FATAL BUT 100% PREVENTABLE IN HUMANS
WITH PROMPT AND COMPLETE POST-EXPOSURE PROPHYLAXIS (PEP)



RABIES EXPOSURE RISK ASSESSMENT

- All animal exposures must be assessed for potential rabies virus exposure and whether rabies PEP is required.
- Risk assessment is based on behaviour and health status of the animal, animal species, and geographical area where the exposure took place. Vaccination history of the animal may be unreliable, if in doubt, provide PEP.
- High risk rabies incidents may include: unprovoked animal attack; animal with unusual behaviour e.g, domestic animals becoming aggressive and wild animals appearing 'tame' ; sick animal e.g, drooling, wobbling/unsteady gait, snapping at imaginary objects, and/or animal having died within 2 weeks after the human attack.
- Rabies is not transmitted by birds or reptiles. Low risk species in South Africa (RSA) include mice, rats, squirrels, monkeys and baboons.
- Do not delay PEP pending laboratory confirmation of rabies in an animal – PEP may be discontinued if results are negative for the animal involved.

MANAGEMENT OF PATIENT

General wound management is critical in all patients:

- Flush well with soap and water for at least 5 - 10 minutes, then clean with chlorhexidine solution (0.05%). Disinfect with iodine solution/ointment.
- Avoid or delay suturing (where possible) and use of local anesthetic agents (may potentially spread the virus locally).
- Provide antibiotics (e.g. amoxicillin clavulanate) and/or tetanus vaccination as required.

Patient with animal exposure

Category I
No direct contact with animal (for example, being in the presence of a rabid animal or petting an animal)

→ **NO ACTION**

Category II
Direct contact with animal but **NO BREACH OF SKIN, NO BLEEDING** (for example bruising or superficial scratch)

→ **PROVIDE FULL COURSE OF RABIES VACCINE**

Category III
Direct contact with animal with BREACH OF SKIN, ANY AMOUNT OF BLEEDING, CONTACT WITH MUCOSAL MEMBRANES (for example lick on/in eyes or nose), CONTACT WITH BROKEN SKIN (for example licks on existing scratches)

→ **WOUND MANAGEMENT**
+
RABIES IMMUNOGLOBULIN
+
FULL COURSE OF RABIES VACCINE

Figure 1: Algorithm for rabies PEP for patients with no history of previous rabies pre-exposure prophylaxis (PrEP) or PEP

RABIES VACCINE

- Vaccination schedule requires FOUR doses.
- Course: days 0, 3, 7 and any day between day 14 and 28 (Day 0 = day of first vaccination).
- Intramuscular injection in deltoid muscle in adults, anterolateral thigh in small children (< 2 years of age). INEFFECTIVE IF GIVEN IN GLUTEUS MAXIMUS (Buttocks).
- Dose: 1 vial equals one dose (regardless of vial size) for adults/children.

RABIES IMMUNOGLOBULIN (RIG)

- Dose: 20 IU (human derived RIG products) or 40IU (equine derived RIG products) per kilogram of body weight (i.e. calculate for each case). Infiltrate RIG in and around wounds, giving as much as anatomically possible without compromising blood supply (especially for extremities).
- Evidence has shown that maximum infiltration of RIG in and around the wound is effective and that there are no benefits from additional intramuscular administration of any remaining RIG at a site distant to the wound.
- If multiple wounds, dilute RIG in equal volumes of saline and infiltrate all wounds.
- Different strengths/preparations for the RIG products are available. Check the package insert of all RIG products to ensure that the right dosage and volume is administered.
- RIG provides immediate immunity and is administrated as soon as possible but not beyond 7 days after administration of first dose of vaccine (for example, if not available at clinic, needs to be urgently sourced).

SPECIAL CONSIDERATIONS

- **Immunocompromised**: Symptomatic HIV infection or other documented immunodeficiency, in category II and III exposures, provide full course of vaccine and RIG, regardless of previous rabies vaccination history.
- **Pregnant women & children**: No contraindication to vaccine or RIG.
- **Individuals who have been vaccinated for rabies before**: No RIG required. For PEP, give booster vaccination (Course: days 0 and 3) (irrespective of pre-exposure vaccination antibody titer).
- **Individuals at high or continual risk for rabies exposure (such as veterinarians)**: Provide pre-exposure vaccination comprising 2 doses of vaccine (Course: Day 0 and 7). Monitor antibody over time through serological testing.

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Department:
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MORE INFORMATION:
NICD website: www.nicd.ac.za
NICD Hotline for Clinical Advice: 0800 212 552
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