# Tick Bites
## Prevention, Removal, Treatment and Early Lyme Borreliosis

Ticks are blood feeding ectoparasites with a global distribution, and are important vectors of disease. Local to the Highlands, the Ixodes tick is a host to the spirochete *Borrelia Burgdoferi*, causing Lyme Borreliosis. Ticks are common in the summer months, and are also present in spring and autumn.

### Tick Avoidance

- When outdoors check for ticks every 2-3 hours and promptly remove them. Self examine your body after being in a tick infested area.
- Wear long trousers with socks and shirts tucked in
- Use premethrin treated clothing and repellent containing PMD (longer action) or DEET (shorter action) in tick infested areas.

### Tick Removal

- Attempt removal as early as possible (Lyme disease risk low if attached for <24-36 hours).
- Tick removal tools should be used where possible.

or

- Use fine tipped forceps to remove ticks, grasping the tick close to the skin and pulling without twisting '(as shown above in diagram).
- DO NOT ATTEMPT OTHER METHODS – likely to be ineffective and or potentially harmful
- After removal discharge patient with patient information leaflet

### Treatment

- Do not routinely provide prophylactic treatment for Lyme Borreliosis
- Do not perform laboratory tests for suspected early Lyme Borreliosis – too early for tests to be positive and therefore of any use.

### WHO SHOULD RECEIVE TREATMENT?

**EARLY LYME BORRELIOSIS – without cardiac or neurological signs**

- Erythematous rash (Erythema Chronicum Migrans) at site of bite
  - Early localised manifestation - present in upto 90% of cases within 1 month of bite
  - Any Erythema is best treated as possible ECM
  - Flu-like symptoms

**Early Disseminated Disease**

  - Unexplained headaches and neck stiffness
  - Facial Palsy
  - Cardiac symptoms/signs

**Late Lyme Disease**

  - Arthralgia & arthritis
  - Other neurological problems

Will need discussion with Micro/ID for management advice and ongoing care

**TREATMENT OF EARLY LYME BORRELIOSIS**

**Non-Pregnant over age 12**

- **Doxycycline 100mg BD for minimum 14 days**

**Children Under 12 & Pregnant or Breast Feeding Women**

- Doxycycline is contra-indicated in these groups
- Use **Amoxicillin** for minimum 14 days
  - Under 1yr See Children's BNF and seek advice
  - Age 1 -4yrs 250mg TDS
  - Age 5-12yrs 500mg TDS
  - Adult 500mg TDS

**If penicillin allergy use Cefuroxime** 500mg BD for minimum 14 days, recognising that this may result in treatment failure.

## ADDITIONAL LINKS

Highland Formulary Lyme Disease Treatment - http://intranet.nhsh.scot.nhs.uk/Clinical/Formulary/HJF/Highland%20Formulary.pdf#page=164

NHSH Lyme Borreliosis User Manual – http://intranet.nhsh.scot.nhs.uk/Org/DHS/SSU/Medical_DiagnosticsDivision/Laboratories/Laboratories%20Handbook/Lyme%20borreliosis%20User%20Manual.pdf

References:

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2. UptoDate.com
3. Patient.co.uk
4. BNF
1. British Infection Association - The epidemiology, prevention, investigation and treatment of Lyme borreliosis in United Kingdom patients: A position statement by theBritish Infection Association. March 2011. (http://www.britishinfection.org/files/1514/4558/9412/PIIS0163445311000727_-_Lyme_Disease_BIA_Position_Statement.pdf)