



DOESN'T A TICK MEAN 'GOOD'?

A presentation by Tony Green

NOT NECESSARILY, AS WE'LL SEE...

- Most (insect) ticks have 8 legs & look like very tiny spiders
- They hang on to & bite their prey in order to feed on its blood
- The prey is any mammal (including humans), bird, or amphibian, or rarely a reptile
- About 97% of tick bites don't have any serious or lasting effect



MORE ABOUT TICKS #1 OF 2

- They live wherever they can find prey & leaf cover, mainly in woods, fields, parks, & long grasses & not just in the U.K.
- They can't fly or jump, just crawl, clutch & hang on, bite & feed, & drop off
- Ticks are tiny – under 3 mm or 1/8". They can grow to 8 mm (about the size of a pea) when fully gorged with blood



MORE ABOUT TICKS #2 OF 2

- Nymphs (young ticks) are as small as a poppy seed, & easily mistaken for a speck of dirt or a tiny scab, so you don't notice them
- Their saliva contains an anaesthetic, so you don't feel their bite
- They often stay on their prey for several hours before starting to bite & feed
- After 7 or 8 days, the fully-gorged tick drops off.



BUT SOME CAN MAKE US ill

- If a tick bites and feeds on an animal infected with Lyme disease (Lyme borreliosis), then bites and feeds on a human, it may transfer the disease.
- For infection to occur, the tick must stay on the human for around 24 hours. If undisturbed, they stay on for 7 or 8 days

WHAT TO DO IF YOU FIND A TICK ON YOU (OR YOUR CHILD OR DOG)

- Get it off & out of your skin A.S.A.P. to stop it releasing more saliva or regurgitating its stomach contents into the wound
- Use fine-tip tweezers to grasp the tick as close as possible to your skin. Don't twist or crush it, but slowly pull upwards to avoid leaving its head or mouth-parts in your skin
- Don't worry if the bits stay in your skin – it will naturally eject them as it heals
- Wash the bite-point with soap & water or apply antiseptic
- A small red round patch will appear after 3 to 30 days. If you're lucky it will start to fade away a few days later

BUT YOU MAY HAVE LYME DISEASE IF:

- The rash persists for over 2 weeks, &/or starts to spread out “looking like a dart board bull’s eye.” Its edges may feel slightly raised.
- Rash spread can vary:
 - averages 6” across
- Some find rashes occur on several parts of the body
- 1/3 of infected patients have no rash



SERIOUS SYMPTOMS IN EARLY/MIDDLE STAGE

- Flu-like: fatigue, muscle pain, joint pains, headaches, fever, chills, neck stiffness
- Paralysis of facial muscles, usually on one side (Bell's Palsy)
- Nerve pains that may be sharp or prickly

LATER SYMPTOMS (#1 OF 2)

- Swelling & pain in the joints (inflammatory arthritis)
- Nervous system problems e.g. numbness & pain in limbs, paralysed facial muscles, memory problems, difficulty concentrating

LATER SYMPTOMS (#2 OF 2)

- Inflamed membranes around brain & spinal cord (Meningitis) causing severe headache, stiff neck & over-sensitivity to light
- Inflammation of the heart (Myocarditis) or its surrounding sac (Pericarditis), heart block or heart failure
- Lyme disease doesn't just damage life: **it can kill**

DIAGNOSIS CHALLENGES



- Patient may show just 1, 2 or many symptoms
- Symptoms are like those in many other diseases
- Tick bite may have transferred other diseases as well (in 2% to 12% of cases)
- Symptoms differ in different patients e.g. single rash/several rashes/no rash
- Timescales differ for onset of symptoms
- GP may not have encountered it before, as only 2k-3k confirmed cases a year in England & Wales. There may be far more undiagnosed cases

HOW IS IT TREATED?

- Disease is caused by bacteria (not virus) so antibiotic tablets/capsules/liquid should be used as prescribed, usually for 2-3 weeks
- **If done early** (don't wait for diagnosis!) completing the antibiotic course should eliminate the disease
- Lab test can confirm the diagnosis

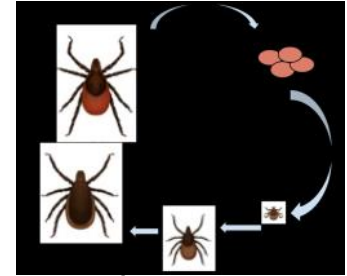
TREATMENT SHOULD BE EARLY

- ...To avoid serious complications
- If done late, symptoms are harder to treat: the main problem becomes the body's defensive use of inflammation, which if excessive can harm or kill.
- Unknown why some patients recover even if antibiotic courses are taken long after the disease starts, while others remain ill.



FREQUENTLY ASKED QUESTIONS # 1

OF 2



- **Q:** What's a tick's life cycle?
- **A:** They live about 2 years, from (no-legged) egg to (6-legged) larva to (8-legged) nymph to adult - when females are bigger than males. They spend most time under leaf mould, as they must avoid cold & need 80% moisture
- **Q:** How often do they feed?
- **A:** Once as a larva, once as a nymph, & once as an adult. When ready to feed they climb to the tip of a grass stem so can clutch prey as it brushes past
- **Q:** What type of tick is most likely to bite us?
- **A:** A nymph of the sheep/deer tick, which is most active from Spring to Autumn. 20 tick types are known in the U.K.

FREQUENTLY ASKED QUESTIONS #2

OF 2

- **Q:** How far or fast can ticks crawl?
- **A:** They crawl slowly, to save energy, except when seeking a safe place to feed.
- If get on e.g. a sandal, can crawl to the top of the leg within a few minutes.
- And next, the Big Question...

HOW CAN WE AVOID LYME DISEASE?

- Risk-tolerant? Ignore the risk & don't change habits or worry
- Risk-averse? Assess how likely anywhere we go to has ticks; dress to prevent ticks reaching our skin; use insect repellent; keep to the paths; & check ourselves/each other at the end of the day to ensure no ticks, or remove any that are there
- Don't drop your guard when out of the UK: 15% of those known to have Lyme disease were infected whilst on holiday.

QUESTIONS



- If I've learned enough to give a correct answer I will.
- Otherwise I'll note the question, research to find an answer, & include the answer in the minutes.