

## Encephalitozoon cuniculi

### Prevalence

Can infect rabbits, mice, rats, hamsters, guinea pigs, dogs, non-human primates and many other mammals. Considered to be extremely common in rabbits, relatively rare in other lab animals species.

### Diagnosis

ELISA, IFAT, histopathology.

### Screening

Annually or bi-annually

### Disease

Natural infections are usually sub-clinical. In mice there are strain differences in susceptibility to experimental infection, ranging from resistant (BALB/c, A/J and SJL) to very susceptible (C57BL/6, DBA/1, 129/J). Infection is lethal in nude mice.

### Strains

Number of strains unknown. Has the synonyms of *Nosema cuniculi* and *Nosema muris*.

### Comment

Protozoan of the order Microsporidia.

### Transmission

Mainly horizontal by the orofecal route. Organisms shed in urine. Vertical transmission (transplacental) has been demonstrated in rabbits but not in other species. Known to be a contaminant of transplantable tumours

### Duration

Chronic, usually latent infection in all species. May be present for greater than 1 year

### Durability

Spores are resistant to drying for up to 4 weeks. Other information is sketchy but use of sporicidal disinfectants and high temperatures thought to be effective.

### Significance

Usually low in studies involving rats and mice, but significant in studies involving passage of transplantable tumours and other materials. May alter humoral immune responses.

### Control

No known effective chemotherapeutic agents. Serologic testing and selection of antibody free breeding stock has successfully been used for eradication in rabbits. Caesarean rederivation, improved sanitation and barrier maintenance in rats and mice, but the possibility of vertical transmission should not be discounted.

### CAUTION

Mice and rats should not be housed near known infected rabbit stocks

### Reading

"Infectious diseases of Mice and Rats" – National Academy Press: ISBN 0-309-03794-8.



IMVS Veterinary Services Division

phone +61 8 8261 1033 fax +61 8 8261 2280 e-mail [vet.services@imvs.sa.gov.au](mailto:vet.services@imvs.sa.gov.au)



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