Echinococcosis: A Case Study in Tibet
Tibetan Culture

- Seminomadic pastoralists
- Livestock farming
  - Sheep, cattle, yaks
- Dogs
  - Help with farming
  - Buddhist monk culture allows strays
Echinococcosis in Tibet

- High endemicity (WHO)
  - 6.6% of people on Tibetan Plateau = cysts
- High prevalence of parasite in animals
  - Dogs (55% of tested)
  - Livestock (Sheep = 54%, Yaks = 72%)
At-Risk Populations

- Preschool age children
  - Direct contact with dogs
  - Higher disease prevalence in adults b/c cysts become symptomatic over time

- Occupation and environment
  - Pastoralism
  - Dog ownership
At-Risk Populations

- **Women**
  - They care for dogs
  - Work with yak feces
  - (Pregnant = immune suppressed)
- **Low socioeconomic status**
  - Water quality issues
  - Illiteracy
Suggested Interventions

- Treat people with long-term albendazole therapy
- Vaccinate or treat dogs
- Prevent dog access to livestock entrails and internal organs
Interventions

- Meat inspection and disposal of infected parts
- Improved hygiene
- Education
Interventions

- Cultural challenges:
  - Lack of interstate cooperation
  - Difficult logistics (access)
  - Cultural antagonism
  - Lack of surveillance of animal infection levels
Land-use changes

- Climate change
  - Less rain = hard to keep plants for farming
  - More snow = hard for animals to forage

- Overgrazing
  - Could bring in small mammals, hosts of E. multilocularis
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