PRACTICAL TOXICOLOGY

- Five Components of Diagnosis
  - Circumstantial Evidence
  - Clinical Signs
  - Postmortem examination
  - Clinical pathology tests and chemical analysis
  - Experimental evidence

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PRACTICAL TOXICOLOGY

- Circumstantial Evidence
  - Natural
    - Mineral
    - Plants
  - Man made
    - Industrial contamination
    - Herbicides, pesticides
  - Season of the year

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PRACTICAL TOXICOLOGY

- Circumstantial Evidence
  - Domestic compounds
    - Household, automobile etc
  - Drugs
    - Human medicines given to animals e.g. paracetamol
  - Food and Water contamination
    - Blue green algae
    - Mouldy foods

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PRACTICAL TOXICOLOGY

- Clinical Signs
  - Acute vs chronic, health, age etc
  - Nervous signs
  - GIT
  - Hepatoxins

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PRACTICAL TOXICOLOGY

- Clinical Signs
  - Nephrotoxins
  - Colour of urine? Smell?
  - Blood
  - Colour of blood, dark, bright red, cyanotic
  - Respiratory
  - Breath? Smell?
  - Cardiovascular

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PRACTICAL TOXICOLOGY

- Postmortem examination
- Careful pathological examination
  - Don't euthanase the animal before getting enough information from a thorough examination and record info
  - Odours, colours of note
  - Stomach contents/rumen
  - Colour and odour
  - Liver, Kidneys etc
  - Appearance, colour etc

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PRACTICAL TOXICOLOGY

- Clinical pathology tests and chemical analysis
  - Tissue samples
    - if in doubt take plenty, fresh and fixed
  - LABEL carefully and individually store tissues
  - Urine is very important for toxicology, put in a glass or plastic container
  - CHECK with labs on how to handle potentially hazardous material
  - Brain – half fixed and half fresh

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PRACTICAL TOXICOLOGY

- Clinical pathology tests and chemical analysis
  - Need to have some idea of what to test for based on history, CE and other
  - Residue issues may be important in food animals

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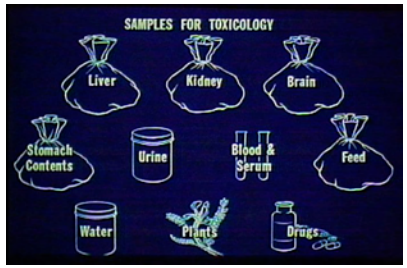

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PRACTICAL TOXICOLOGY

- Experimental Evidence
  - Research papers and case reports, manufacturer information

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CASE OF SUSPECTED POISONING

- Jack Russell terrier, 7 months old

History: Was normal until fed on Saturday night. A sausage (from human's meal the night before) and raw meat was given. The dog was seen to vomit its food (suggested there was undigested fat seen) after the meal. The dog was put in its kennel and not observed until the next morning. It had apparently vomited during the night, was barely able to stand. The vet saw the dog within about 30 minutes of the phone call. The dog had bilateral dilated pupils, was hypothermic, white mucous membranes and could barely stand.

- The dog received fluids, dexamethasone but went into respiratory arrest and died about an hour after arriving at vet's.
- A postmortem showed congestion in the GIT, appearance of brain oedema. Histo was not very revealing. Only abnormality on bloods was hypocalcaemia.

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