Backyard Poultry : Individual Medicine and Surgery

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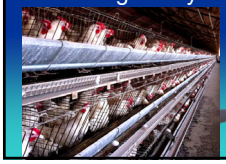
Backyard Poultry

- Increasing popularity & number
  - Companionship
  - Egg and meat production
- Practitioners
  - Increasingly asked to provide care
- Backyard poultry medicine
  - Differs from commercial production

Backyard Poultry

- Laws/Regulations
  - Designed for large commercial production
  - Regulatory requirements – Mandatory
  - Veterinary Obligations
  - Violations – Criminal consequences, civil liability
  - Regulatory violations – Fines, reprimands, etc…



Backyard Poultry

- Reportable Diseases (ODA, USDA)
  - Backyard Flock
    - Required Reporting of disease
    - Quarantined
    - Depopulated!
  - OHIO ANIMAL AND ZOONOTIC DISEASE REPORTING REFERENCE (on line)
- Professional duty to guide clients on applicable laws

Backyard Poultry

- Laws to protect public health
  - Meat – consumed on the premise, no laws
  - if moved off premise, then subject to State/Federal Regulations
  - Poultry Products Inspection Act (PPIA)
  - Administered by USDA - FSIS
  - Cannot donate meat for consumption outside of their immediate household

Backyard Poultry

- Laws to protect public health
  - Eggs – Regulated by FDA-HHS
  - Safety requirements – Salmonella enteritidas
  - Flocks < 3,000 birds exempt
  - However, eggs must be kept < 45 F at all times
  - Must bear “Safe Handling Instructions”
  - USDA – ensures egg quality
    - Grades eggs
  - Exceptions to Regulations exist

Backyard Poultry

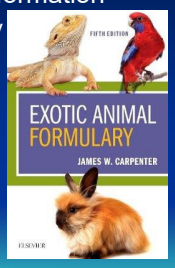
- Backyard Poultry = Food Producing Animals
- Important Regulatory Considerations
  - Approved medications
  - Withdrawal periods
- Medications formulated for large scale use
- Be familiar with Legislation, Guidelines and Scientific Literature!

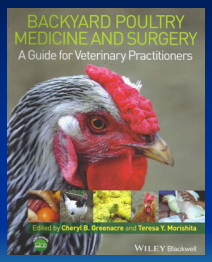
Resources

- FARAD – drug database for food animals
  - www.farad.org/vetgram/
- FARAD – prohibited drugs
  - www.farad.org/eldu/prohibit.asp
- USDA – Contact information & links to resources
  - www.fsis.usda.gov/

Backyard Poultry

- Practical Information
  - Husbandry
  - Medicine
  - Surgery
- University extension websites





Sourcing Backyard Poultry

- Neighbor, Backyard Enthusiast, Feed Store,
- Farmers Market, Hatchery
  - Easy way to introduce disease!

- Recommend to purchase from National Poultry Improvement Plan (NPIP) member Hatcheries or Breeders

Sourcing Backyard Poultry

- National Poultry Improvement Plan (NPIP)
  - Established 1930, voluntary program
  - Ensure disease free chicks
  - Initially to control *Salmonella pullorum*
  - *S. typhimurium, S. enteritidas*
  - *Mycoplasma spp. Low Path Avian Flu*

Sourcing Backyard Poultry

- Transport of birds into & within State is regulated
- Health Certificate needed for most birds
- Accreditation Category II (food animals)
- Fetilized eggs – treated same as live birds
- Exception – NPIP Sourced eggs, chicks
  - Uses form VS-9-3 in lieu of health certificate

Caring for Backyard Poultry

GI Chicken Diseases
- Acronosis
- Avian intestinal spirochetosis
- Cancer
- Canker (trichomoniasis)
- Coccidiosis
- Cecal worms
- Coccidiosis
- Cottonthroat
- Crop impaction
- Cryptosporidiosis
- Dactylogyridae mycotoxicosis
- Fowl cholera (Pasteurellosis)
- Fowl pox
- Fowl typhoid
- Hen dunnes syndrome
- Histostomosis
- Inclusion body hepatitis
- Infectious bursal disease
- Infectious coryza
- Intestinal volvulus
- Ileoascariasis
- Malabsorption syndrome
- Marek's disease
- Necrotic enteritis
- Parahistoid
- Pendulous crop
- Pullorum disease
- Roundworm infection
- Salmonellosis
- Sinusitis
- Sour crop
- Tapeworm infection
- Tuberculosis
- Vitamin A deficiency
- Worms

Traumatic Diseases
- Beak deformities

Beak injurie
- Blindness
- Breast blister
- Bruising
- Bumblefoot
- Cannibalism
- Crooked toes
- Crop impaction
- Curled-toe paralysis

Eye/EarChicken Diseases
- Ammonia toxicity
- Anophthalmia
- Avian encephalomyelitis
- Avian influenza
- Blindness
- Cataracts
- Chronic respiratory disease (MG infection)
- Conjunctivitis
- Ear infection
- Erysipelas
- Eye injuries
- Fowl cholera (Pasteurellosis)
- Fowl pox
- Glaucoma
- Infectious bronchitis
- Infectious coryza
- Infectious laryngotracheitis
- Marek's disease
- Newcastle disease
- Ocular gout
- Omphalitis (sticky chick)
- Vitamin A deficiency

Neurological Disease
- Avian encephalomyelitis
- Avian influenza
- Blue-green algae poisoning
- Botulism
- Cerebellar hypoplasia
- Curled-toe paralysis
- Dactylarosis
- Ear infection
- Fowl cholera (Pasteurellosis)
- Head trauma
- Listeriosis
- Marek's disease
- Newcastle disease
- Pantothenic acid deficiency
- Peripheral neuropathy
- Pyrrolizidine alkaloid toxicity
- Virulent Newcastle disease (VND)
- Vitamin E deficiency
- Zinc deficiency

Infectious Diseases
- Anzonosis
- Avian encephalomyelitis
- Avian influenza
- Avian intestinal spirochetosis
- Avian mycobacteriosis
- Chicken infectious anemia
- Chronic respiratory disease (MG infection)
- Erysipelas
- Fowl cholera (Pasteurellosis)
- Fowl pox

Reproductive Diseases
- Bloody
- Cancer
- Egg binding
- Egg drop syndrome
- Egg yolk peritonitis
- Immature or defective shell gland
- Internal layer
- Low Blood Calcium Level
- Ovarian cancer
- Oviduct impaction

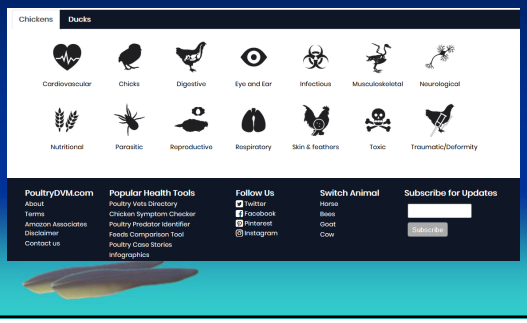
Musculoskeletal Diseases
- Avian osteoporosis
- Bumblefoot
- Choline deficiency
- Crooked toes
- Curled-toe paralysis
- Enterococcal spondylitis
- Fowl cholera (Pasteurellosis)
- Gout
- Infectious synovitis
- Keel bone injury

Nutritional Disease
- Aflatoxicosis
- Anemia
- Arginine deficiency
- Ascites
- Atherosclerosis
- Avian gout
- Avian osteoporosis

Respiratory Diseases
- Aerosacculitis
- Ascites
- Aspergillosis
- Avian chlamydiosis
- Avian influenza
- Brooder pneumonia
- Caseo
- Chronic respiratory disease (MG infection)
- Cryptosporidiosis
- Fowl cholera (Pasteurellosis)
- Fowl pox
- Gapeworm Infection
- Histoplasmosis
- Infectious bronchitis
- Infectious coryza
- Infectious laryngotracheitis
- Mycoplasmosis
- Necrotic liver disease
- Ornithobacteriosis
- Pneumonia
- Respiratory tract infection
- Sinus infection
- Sinusitis
- Snicken head syndrome
- Toffee poisoning

Caring for Backyard Poultry

- http://www.poultrydvm.com/



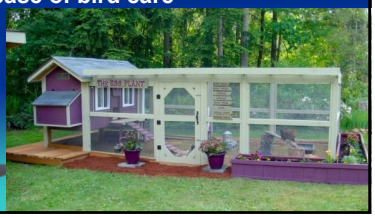
Examination

- **History – signalment**
  - **Breed, age, gender**
  - **Use? eggs, meat, mating**
  - **Pet**

- **Flock**
  - **Size, length of ownership**
  - **New additions (biosecurity)**
  -

Environment

- **Housing**
  - Size, perches, substrate
  - Free Range ?
  - Provide for ease of bird care
  - Comfort
  - Well-being

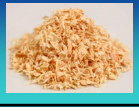


Environment

- **Housing**
  - Provides adequate space for # of birds
    - Overcrowding – fighting, cannabilism
  - Easy to clean
  - Protection from Predators
  - Adequate Ventilation
    - Moisture removal (winter)
    - Heat removal (summer)
    - Provide fresh air

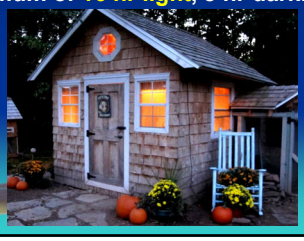
Environment

- **Litter**
  - Absorbant
  - Loose
  - Inexpensive
  - Pine shavings-
  - Straw – not very absorbant
  - Sand – expensive, cool in hot weather
  - Shredded paper -



Environment

- **Housing- Lighting - Hens**
  - Poultry need a natural daylight/dark cycle
  - Hens – need 12 h daylight to lay
  - Maximum of 16 hr light, 8 hr darkness



Environment

- **Temperature**
  - Chicken body temperature – 105 F – 107 F
  - Ideal temperature range 50 F to 75 F
  - **Brooding Chicks**
    - Start @ 95 F
    - Decrease 5 degrees each week
    - Limit outdoor access to birds < 6 weeks of age
    - Down being replaced by feathers

Examination -Feed

- **Diet**
  - Type, where purchased
  - How old ?
  - Medicated ?
- **Common Problems**
  - Prolonged storage (nutrient depletion)
  - Feeding the wrong "life-stage" diet
  - Improper Vitamin/mineral levels, Home mix

Nutrient Needs Differ!

• **Pullet Starter**	0-6 w	CP 20%	Ca 1%
• **Pullet Grower**	6-16 w	CP 18.6%	Ca 1%
• **Pre-Lay**	16-18 w	CP 18.4%	Ca 2.5%
• **Hen**	18 w	CP 18.3%	Ca 4.2%
• **Rooster**	---	CP 11.54%	Ca 0.75%

Examination

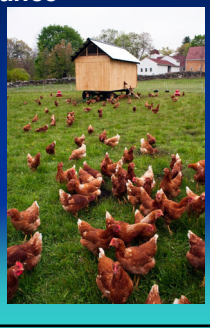
- **Water - Fresh & Clean**
  - Changed daily
  - Waterers cleaned regularly

Physical Exam

- Complete and Thorough
- Start at Head
- Work down towards Feet
- Visual Exam First then Hands on
- Droppings

Visual Exam

- Observe bird from a distance
- Appearance
- Behavior
- Healthy Bird:
- Bright , Alert
- Interacting with Flock



Visual Exam

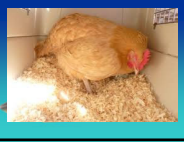
- In clinic, quiet room
- Observe from a distance
- Level of alertness
- Head held high or low?
- Eyes wide open?
- Stance, Posture
- Complete Exam Visually

Visual Exam

- Stance, Posture

Visual Exam

- Fluffed
- Eyes droopy, closed
- Depressed
- Observe respiratory
  - Rate and effort
- Abdomen



Physical Exam

- Gentle Restraint
  - Secure surface
  - Wings held to body
    - Fingers spread
  - Allow normal respirations
    - Lack of Diaphragm
  - Carry under arm
  - Secure legs

Physical Exam

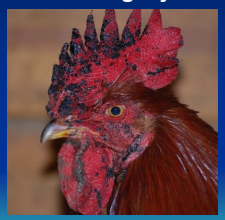
- **Examine Head & Neck**
- **Comb**
  - **Bright red**
  - **Slightly Warm**
  - **Firm**
  - **Free of scabs, lesions**
  - **Refill ~ 1.5 - 2 sec.**

Physical Exam

- **Comb**
  - **Pale color**
  - **Non-laying Hen**
  - **Moult ?**
  - **Anemia ?**

Physical Exam

- **Comb lesions**
  - **Pecking injuries**



Physical Exam

- **Comb lesions**
  - **Pecking injuries**
  - **Frostbite**



Physical Exam

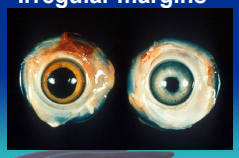
- **Comb lesions**
  - **Pox**

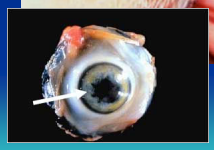

Physical Exam

- **Eyes**
  - **Clear, bright**
  - **Discharge**
  - **Swellings**
- **Pupils**
  - **Well defined**
- **Eyelids**
  - **Wide open**

Physical Exam

- **Eyes**
  - Marek's Disease
  - Grey Iris color
  - Lymphocyte infiltrate
  - Irregular margins





Physical Exam

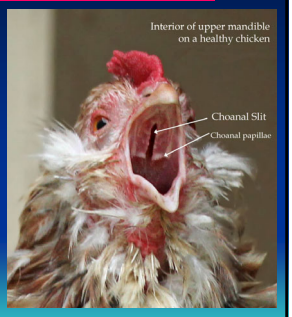
- **External nares**
  - Discharge
  - Crusts
  - Scratches

Physical Exam

- **Beak**
  - Smooth
  - Free of cracks
  - Broken

Physical Exam

- **Oral Cavity**
  - Ulcers
  - Mucosal lesions
- **Choana**
  - Clean,
  - No drainage
  - Samples for
    - Gram stain
    - Laboratory testing



Physical Exam

- **Evaluate Feathers**
  - Clean
  - Smooth
- **Feather Loss**
  - Base of neck
  - Back
  - Rooster/mating

Physical Exam

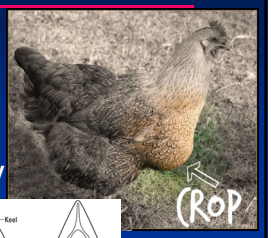
- **Feather Loss**
  - Base of neck
  - Back, Tailhead
  - Rooster/mating

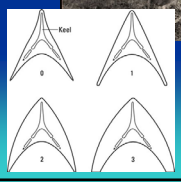
Physical Exam

- Evaluate Feathers
  - Base of feathers
  - Ectoparasites
    - Lice
    - Mites
  - Eggs

Physical Exam

- Evaluate Crop
  - Impaction
  - Grass, springtime
- Evaluate Wings
  - Held up, close to body
- Palpate Keel
  - Evaluate
  - Body condition



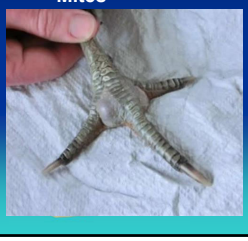


Physical Exam

- Evaluate Abdomen
  - Swelling
  - Respirations
    - Rate
    - Effort
  - Palpate
    - Egg Impactions

Physical Exam

- **Evaluate Feet & Legs**
  - **Pododermatitis**
  - **Hyperkeratosis**
    - **Mites**



Physical Exam

- **Evaluate Cloaca**
  - **Swollen**
  - **Soiled-diarrhea**
  - **Prolapsed**

Normal, Egg Laying Hen

Physical Exam

- **Accurate body weight**
  - **In grams not pounds**

Select Medical Problems

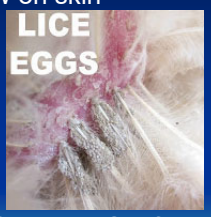
- External Parasites
  - Lice

Poultry Lice

- Common in backyard chickens
- Usually chewing lice
- Feather damage
- Not zoonotic

Poultry Lice

- Menacanthus spp. chew on skin
- Can cause blood loss
- Wings, Abdomen, Breast, Back
- Egg Clusters at base of Feather Shaft



Poultry Mites

- *Dermanyssus gallinae* (Red Poultry Mite)
  - In cracks & crevices of housing
  - More common in warm months
  - Feed on host blood at night
  - Dermatitis, restless at night
  - Anemia, weight loss, death
  - Zoonotic

Poultry Mites

- *Ornithonyssus sylviarum* (Northern Fowl Mite)
  - Feed on blood
  - On breast, thighs, cloaca
  - Entire 5-7d life cycle on host
  - See mites eggs, droppings on host
  - Zoonotic

Poultry Mites

- *Knemidocoptes mutans* (Scaly Leg Mite)
- Crusting, thickening, lifting of scales on legs
- Older chickens
- Skin scrape to ID

Other Ectoparasites

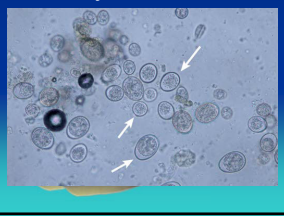
- *Echidnophaga gallinacea* (Stick Tight Flea)
- *Trombiculidae* (Chigger)
- *Argas persicus* (Fowl Tick)
- Biting Flies





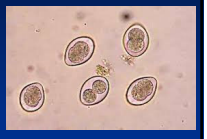
Endoparasites

- Backyard Chickens – greater problem
- Contact with soil, poor management
- Mixed ages housed together
- Survey – Coccidia > Ascarids > Capillaria




Coccidia

- Coccidia – Eimeria spp. (9)
- Species specific
- Most common problem
- Young birds 1-4 months old
- Crowding, housing mixed ages together
- Moist, heavily soiled litter



Coccidia

- Bloody diarrhea, pale combs, lethargy, tendency to huddle, anorexia, weight loss, dehydration, and death.
- *E. tenella* – cecal hemorrhage
- *E. acervulina and E. necatrix*
  - Intestines, less severe
- Resistance increases with age

Coccidia

- Key is prevention
- Treatment
  - Amprolium
  - Sulfamethazine
  - Sulfadimethoxine
    (Off Label Use)
- Vaccine – not commonly used in backyard poultry

Ascarids

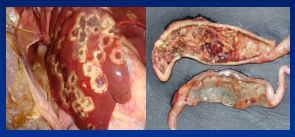
- One of most common helminths seen
- *Ascaridia galli*
- *Baylascaris spp.*
- Decreased body weight
- Diarrhea, anemia
- May increase susceptibility to salmonella
- Eggs infective in environment for 160 wks
- Piperazine – treatment of choice

Cecal Worm

- *Heterakis gallinarum*
  - Egg looks similar to Ascarid
- Morbidity & Mortality seen more in turkeys game birds
- Can affect chickens
- Transmits protozoan
- *Histomonas meleagridis* (Black head)

Cecal Worm

- *Histomonas meleagridis* (Black Head)
- Liver necrosis
- Cecal inflammation
- High Mortality
  - Turkeys (chickens)
- H. gallinarum eggs remain infective for years
- Do not raise turkeys on chicken pastures



Capillaria

- *Capillaria spp.*- "hairworm"
- Earthworm –intermediate host
- Found in esophagus, crop and intestines
- Inflammation & sloughing of the epithelium
- Diarrhea, anemia
- Respiratory disease in quail

Syngamus trachea

- "Gapeworm," nematode
- Often seen in "free range" chickens
- Present in trachea
- Physical blockage
- Gape, extend neck
- Open mouthed breathing

Approved Parasiticides

- Fenbendazole- *Ascaridia & Heterakis , only in breeder birds, not egg layers*
- Permectrin (Permethrin) – Lice, Northern Fowl Mite
- Piperazine - Roundworms

Anesthesia

- **Inhalation Anesthesia**
  - Great speed, safety, predictability in birds
  - Avian respiratory system – very efficient gas exchange system
  - Uptake & elimination of anesthetic gases is much faster in birds than mammals

Anesthesia

- **Injectable Anesthesia**
  - Dose response is variable
    - Among species & individuals
  - Most drugs are non-reversible
  - Questionable safety - higher risk
  - Difficult recovery

Inhalation Anesthesia

- Anesthetics of Choice
- Isoflurane
- Sevoflurane

- Both produce rapid, smooth induction and recovery

Inhalation Anesthesia

- Isoflurane –
  - wide margin of safety
- Sevoflurane
  - low blood solubility
  - induction & recovery more rapid,
  - $$

Inhalation Anesthesia

- Analgesia questionable
- Pre-medicate
  - Butorphanol
    - 2 mg/kg IV (chickens)
  - NSAID
    - Meloxicam 0.5 mg/kg IM, Robenecoxib 2-5 mg/kg IM
  - Tramadol
    - 5 – 10 mg/kg PO

Preanesthetic Considerations

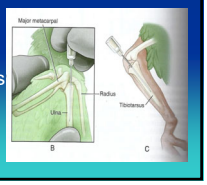
- Five Key Elements:
- 1) Time
  - Keep anesthetic & surgery time to a minimum
  - All surgical equipment prepared & ready
- 2) Limit Blood Loss
  - Ellman radio surgery
  - Surgical laser

Preanesthetic Considerations

- 3) Maintain hydration
  - blood pressure, glucose
  - maintenance fluid 50 ml/kg/day
  - 1st Hour surgery 10 ml/kg/hour
  - 2nd Hour surgery 5 ml/kg/hour
  - Pre-warm fluids (LRS/.9% NaCl)

Subcutaneous fluids

Intraosseus catheter – Ulna, Tibiotarsus



Preanesthetic Considerations

- 4) Maintain Body Temperature
  - Newly hatched chick ~103.5°F
  - Adult chicken ~105°F and 107°F
- Water jacketed pad
- Bair – hot air blanket

Preanesthetic Considerations

- 5) Experience
  - Technician to assist & monitor anesthesia
  - Surgeons skill
    - Association of Avian Veterinarians Conference
    - AAV Wet labs, Master Classes
      - Anatomy, Physiology, Diagnostics
      - Surgery, Disease, Treatments

Association of Avian Veterinarians

Preanesthetic Considerations

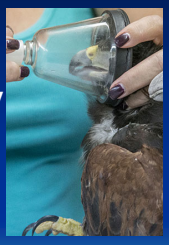
- Fasting - allows the upper GI tract to empty,
  - Reduces likelihood of regurgitation
  - Reduces proventricular and ventricular distension, reducing interference with normal respirations
  - 3 hour fast for most birds
  - Position with crop above level of stomach

Patient Monitoring

- ECG - Standard animal lead positions
- Pulse oximetry
- Ultrasonic Dopplers – very accurate
  - superficial ulnar artery
  - radial artery inside the elbow
- Blood pressure
  - neonatal cuff, distal humerus
  - 90 to 180 mm Hg

Anesthetic Induction

- **Mask induction**
  - **Glottis maintains airway**
  - **Most birds mask down easily**
  - **Oxygen flow rate 1-2 L/min**
  - **Isoflurane 4-5% initially**
  - **Blink – reduce to 3%**
  - **1.5% -2% maintenance level**



Anesthetic Induction

- **Maintain Anesthesia with Mask**
  - **Short procedures**

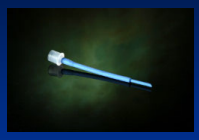
- **Make sure nostrils are clean & patent**

Anesthetic Induction

- **Intubate**
  - **Glottis readily visualized**
  - **Relatively easy to intubate**
  - **Stabilize to head**

Anesthetic Induction

- **Intubate**
  - **Longer procedures**
  - **Artificial ventilation**
  - **Complete tracheal rings**
  - **Uncuffed tube**
  - **Glottis is wider than trachea**
    - **Avoid mucosal damage**
    - **Tracheal strictures**



Ventilation

- **Intubate**
  - Ventilatory support if procedure> 20-30 min.
  - With patient breathing on its own,
    - Provide 1-2 full inspiratory breaths per minute
    - Thoroughly inflates the air sacs
    - Supports complete circulation of air and gases through the air sac system
  - Mechanical ventilation 6-10 breathes/min.

Ventilation

- Vetronics Small Animal Ventilator
- Patients from 10g to 10 kg

Ventilation

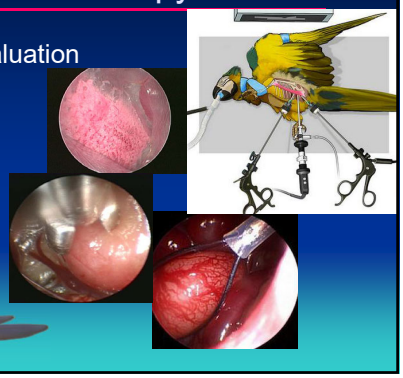
- **Surgical Considerations**
  - Anesthetic gases can escape during procedures that disrupt the air sacs or extensions of the air sacs into pneumatic bones
  - Allow “fresh” air into the respiratory system thereby decreasing the anesthetic gas
  - Expose staff to anesthetic gases

Anesthetic Recovery

- Holding the patient in a light towel wrap or rolling into a loose "burrito"
- Provides mild restraint to prevent chaotic body movements.
- Keeping the bird in a warm, quiet, dark place also aids a smooth recovery

Endoscopy

- Internal evaluation
- Diagnostic sampling
- Surgical procedures



Select Problems - Trauma

- Entrapment of limbs in cages/equipment
- Predator injuries
- Pecking
- Fighting - spurs, nails
  - Reduce density
  - Increase # of feeders
  - Separate roosters

Trauma

- Predators

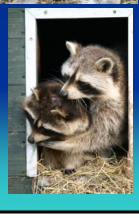
Predator Attack Trauma

- Predators

Generally kill to eat
Small numbers attacked
Return frequently

Predator Attack Trauma

- Predators
- Do not kill just to eat
- Kill many birds at once
- Mink – decapitate birds
- Raccoons – kill and maim
  attempt to pull through fencing



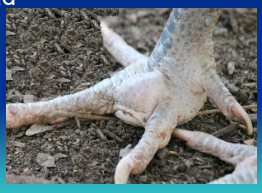
Trauma

- Wounds not penetrating respiratory or abdominal cavities
  - Most respond with basic wound care
  - Topical antiseptics
  - May need to isolate from other birds (cannibalism)

Predator Attack Trauma

Pododermatitis (Bumble Foot)

- Inflammation of the foot
  - Swelling, ulceration, erythema
- Plantar metatarsal pad
- Plantar digital pads

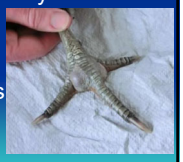


Pododermatitis (Bumble Foot)

- Bacteria – usually Staphylococcus aureus, E.coli, and/or Proteus
- Also:
  - Pseudomonas aeruginosa, Klebsiella sp.,
  - Clostridium sp., Corynebacterium sp.,
  - Streptococcus sp., Pasteurella spp
  - Nocardia sp., Actinomyces sp., Candida sp.,

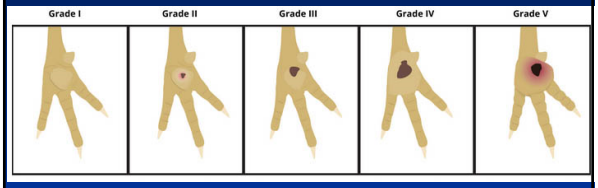
Pododermatitis (Bumble Foot)

- Risk Factors –
  - Previous injury
  - Damp or unsanitary bedding/litter
  - Hard, wet, uneven or rough floor surfaces
  - Poor Diet, Vitamin A/Biotin deficiency
  - Overweight, Lack of activity
  - Overgrown toe nails
  - Excessively dry skin, Scaly mites



Pododermatitis (Bumble Foot)

Clinical Grades

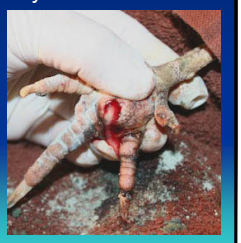


Pododermatitis (Bumble Foot)

- Treatment Options:
- Early stages are much easier to treat
- May only even require simple environment and/or management
- If infection present - surgical debridement, post-surgical care, ± antibiotics

Pododermatitis (Bumble Foot)

- Treatment Options:
  - Drain any fluid accumulation (abscess)
  - Soak foot in Epsom salts every 12 hrs
  - 2% Chlorhexidine solution
  - Povidone-Iodine



Pododermatitis (Bumble Foot)

- Treatment Options:
  - Surgical debridement

Pododermatitis (Bumble Foot)

- Treatment Options:
  - Topical anti-bacterials & Bandage
  - Silver Sulfadiazine
  - Triple Antibiotic Ointment
  - Preparation H
  - Manuka Honey!
  - Poor prognosis if Osteomyelitis present

Pododermatitis (Bumble Foot)

- Manuka Honey – New Zealand



Pododermatitis (Bumble Foot)

- Prevention:
  - Better sanitation
  - Clean coop and enclosures frequently
  - Avoid overcrowding, enlarge area
  - Establish good water drainage, prevent puddling


Pododermatitis (Bumble Foot)

- Prevention:
  - Provide atraumatic substrate
  - Grass, Astroturf, Straw, Sand
  - Balanced diet, avoid obesity, increase activity
  - Birdy Boots, Tuf Foot, Benzoin, Moleskin



Pododermatitis (in Raptors)

- 250 mg Amikicin
- 25 mg Dex.NaPO
- In 25 ml DMSO

- Apply topically to affected foot once daily until resolved

Impacted Crop

- Allowing chickens access to grass clippings.
- Feeding dried oatmeal, soybeans absorb water-swell

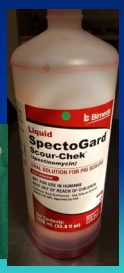
- Feeding a poor quality diet ingest materials they wouldn't normally eat.
- Leaving potentially hazardous objects where chickens can access them

Impacted Crop

- Leaving potentially hazardous objects where chickens can access them
- String, plastic, metal objects…
- Enlarged, firm crop
- Reduced appetite
- Increased thirst
- Foul odor from mouth

Impacted Crop

- Flush crop with warm water
- Endotracheal tube (7.0), catheter tip syringe
- Gently massage crop
- Often bacterial overgrowth
- Spectam (15 ml/gallon water)
- Surgery



Impacted Crop-Prevention

- Keep the grass mowed regularly
- Remove any grass clippings
- Always provide plenty of fresh, clean water
- Do not allow chickens access to objects such as metal, plastic, strings, etc. .
- Do not allow chickens access to composts

Egg Binding

- Pullets brought in to production too early
- Obese hens
- Single or multiple eggs

Egg Binding

- Lack of exercise
- Chronic egg laying
- Calcium deficiency (poor diet)

Egg Binding

- Lethargy
- No eggs laid
- Swollen and pasted vent
- Swollen belly
- Straining, Sitting/squatting abnormally
- Tail pumping
- Excessive time spent in the nestbox

Egg Binding

- Abdominal palpation
- Radiographs
- Ultrasound

Egg Binding

- Warmth
- Massage abdomen
- Manual obstetrical delivery
- Fluids, calcium
- Salpingotomy
- Salpingohysterectomy

Egg Binding

- Salpingohysterectomy
  - Multiple eggs
  - Salvage procedure

Ascites/Egg Yolk Peritonitis

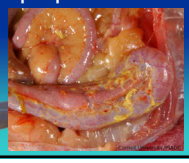
- Predisposing Factors
- Chronic Egg Laying
- Obese hens
- Existing infections
- Heavy parasite load
- Ovarian tumors

Ascites/Egg Yolk Peritonitis

- Lethargy
- Depressed
- Reduced activity
- Horizontal Posture
- Increased Respiratory Rate
- Open mouthed breathing
- Abdominal distention

Ascites/Egg Yolk Peritonitis

- Abdominal distention
- Liver disease
- Salpingitis
- Egg yolk coelomitis
- Abdominal palpation



Ascites/Egg Yolk Peritonitis

- Radiographs
- Ultrasound
- Abdominocentesis

Ascites/Egg Yolk Peritonitis

- Treatment varies depending on cause/severity of clinical signs
- Mild cases, no secondary bacterial infection may only require supportive care.
- Infection present, usually analgesics, anti-inflammatories, antibiotics, supportive care,
- Reducing egg laying activity.
- Surgery - remove excessive egg material.

Foreign Body Ingestion

- Free Range Birds
- Individual Birds
  - Obstructive disease
  - Toxic exposure
  - Metal poisoning (lead, zinc)

Foreign Body Ingestion

- Symptoms:
  - Anorexia
  - Regurgitation
  - Diarrhea
  - Weight loss
  - Neurological signs (lead, zinc)

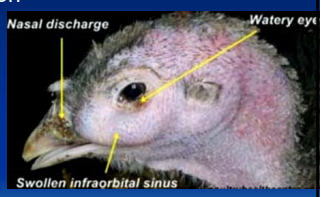
Foreign Body Ingestion

Respiratory Disease

- Not common in backyard Poultry
- Usually is non-specific
  - Dusty environment
  - Poor ventilation
  - High ammonia levels
- Usually in spring or fall
- Control humidity
- Proper ventilation

Respiratory Disease

- Mycoplasma infection (usually gallisepticum)
  - Can be silent infection
  - Respiratory rales,
  - Sneeze
  - Puffy, swollen faces
  - Passes thru egg
  - Silent infections



Respiratory Disease

- Fowl Cholera (Pasteurella multocida)
  - Very common
  - Swollen eyes, wattles
  - Septicemia
  - Can be chronic disease
  - Bites from cats, rats
  - Tetracyclines, Sulfas

Respiratory Disease

- Infectious Laryngotracheitis (ILT)
  - Usually 7 days after returning from show
  - Gallid Herpes virus
  - Death (may double each day)
  - Dyspnea
  - Head shaking
  - Cough
  - Use genetically modified ILT vaccine

Respiratory Disease

- Less Common
- Infectious Bronchitis – coronavirus
- Infectious Coryza – Avibacterum gallinarum (Hemophilus)
- Avian Influenza (Low Pathogenic AI)
  - High Path AI – rapid death, neurologic signs
- Newcastle's Disease – Avian Paramyxovirus 1
  - Lentogenic, Mesogenic, Velogenic
-

Backyard Poultry

- Poultry – Food Producing Animals
- Important Regulatory Considerations
  - Approved medications
  - Withdrawal periods
- Medications formulated for large scale use
- Be familiar with Legislation, Guidelines and Scientific Literature!

Backyard Poultry

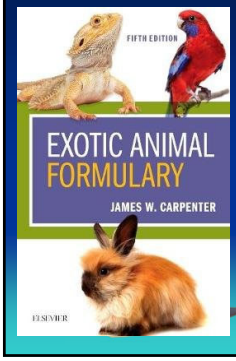
- Internet Reference

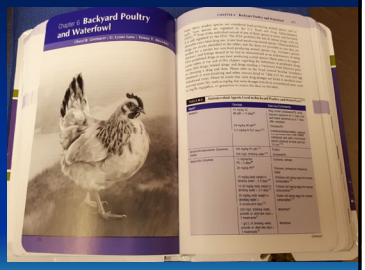
OHIO ANIMAL AND ZOONOTIC DISEASE REPORTING REFERENCE

Backyard Poultry

- Animal Disease Diagnostic Laboratory

Resources





Resources

- FARAD – drug database for food animals
  - www.farad.org/vetgram/
- FARAD – prohibited drugs
  - www.farad.org/eldu/prohibit.asp
- USDA – Contact information & links to resources
  - www.fsis.usda.gov/
- http://www.poultrydvm.com

Free Range Chicken