

Avian Welfare, Flight Mechanics, and Ethics

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LafeberVet Spring Webinar Series

Avian Welfare

- What is the experience of life through the perspective of the bird?
 - Define animal (avian) welfare?
 - Minimum
 - Ideal vs captive optimal
 - natural evolutionary biology
- Freedom vs Safety
- What have we normalized?
 - Unintentional neglect
- What have we generalized?
 - The generic bird vs the evolutionary machine of uniqueness and sentient being
- Scientific Approaches to Avian Welfare
 - Feelings based
 - Function based
 - Nature based
- Preventive Avian Welfare – increasing freedoms
 - Social/environmental enrichment
 - UV exposure-outdoors
 - Aviaries- indoor/outdoor connected
 - Allowing flight
 - Foraging opportunities
- Avian Welfare as an afterthought
 - Physical and psychological stressors
 - Behavioral disorders
 - FDB
 - Screaming
 - Biting
 - Reproductive issues
 - Treatment is the same as the prevention+
 - Applied Behavior Analysis -losing the labels/creating action plans
 - Functional Assessment
 - Antecedent
 - Behavior
 - Consequence
 - Education not guilt

- Guilt leads to stewards desire to rehome
- Education is empowerment

Flight Mechanics

- Definitions
 - Airfoil
 - Lift
 - Drag
 - Induced
 - Profile (form)
 - Parasitic
 - Boundary layer
 - Stall
 - Turbulence
- Feather Anatomy
- Flight Mechanics of Downstroke
- Flight Mechanics of Upstroke
- Primary/secondary open and feather separation causes high pressure air under the wing to louver through to low pressure on top decreasing backstroke resistance – passive?
- Forward thrust at primary/secondary separation at carpals with minor lift

Ethics

- **Birds Eye View (perspectives) on Wing Trims**
 - Cut feathers poke (irritation)
 - Falling hurts (pain)
 - Afraid / can't escape noxious stimuli (fear)
 - Unable to say yes or no by natural means (limit choice and increase fear → learned helplessness)
 - Total dependence on human steward
- Flight is how bird brains develop independence (avian education)
 - Never Trim Parrots Prior to Fledging
 - Flight is empowerment
 - Flight is their evolutionary design and biological right
 - They can't respond naturally to noxious stimuli when trimmed aggressively.
- Further Physical and Psychological Health Considerations
 - Cardiac and bone health.
 - Psychological wellness
 - To a bird in a cage with a wing trim
 - Yes means "I can't" and No means "I can't"
- Perspectives

- Cruelty?
- Careful steward?
- Fearful owners?
- Flight Ethics
- DVM Responsibilities
- Flight Ethics- Communication, Education, and Informed Consent
- Not trimming and not educating will result in loss of a client*
- Communication of both the risk and benefits of feather trimming and/or leaving the natural wing
- **Education/Communication**
- Regarding flight- 2 way conversation DVM/Client
 - Education of Benefits/Risk
 - Listen and educate
 - Flight goals
 - Freedoms/enrichment
 - Risk factors (Client Fears)
- **Fear** (of loss) is a Primary Client Motivator that “Justifies” Removing flight (the evolutionary response to fear in captivity or in nature)
- Bird “owners” generally have great intentions.
 - Intention vs impact
 - Educate clients from fear-based decision to.....
 - “How do we ensure birds live the best life possible” based decision
 - **Client Discussion topics (Fear Mitigation)**
 - Ceiling fans
 - Household predators- cats, dogs, children, and wildlife
 - Individual habits of household- kids, doors, high ceilings, mirrors, windows, toilets, pools and other outside risk
 - Past flight experience and injuries
- **Long term:**
 - Nerve and bone pain lead to osteomyelitis, nerve impingement;
 - Chronic pain leads to learned helplessness, mutilation, feather destructive behavior, obesity, cardiovascular disease, pododermatitis (bumble foot), OCD,
 - Increased risk over time to predation leads to early death (opportunity/time)
- **Physical Exam**
 - Species- body type, wing load, tail length
 - Body condition/weight
 - Past or current medical issues or disabilities
- Is it possible to trim feathers and achieve the goals of the owner and the not have an overwhelming impact on the bird physically or psychologically?
 - Technique sensitive?
- IF Trimming is Deemed an Acceptable Risk.....
 - With the knowledge of flight mechanics
 - With the benefit of clear communication and education of risk and benefit
 - With the experience of a physical exam and history

- With the knowledge that aggressive trims based upon fear of loss may be responsible for many of the physical and psychological problems manifested in birds but short and long term
- The right individual decision can be made with wisdom and informed consent
 - Consider a much lesser technique that mitigates many current negative trends that impact both client satisfaction with their avian companions and patient holistic health.
- The New Technique Skinny Trim
- Skinny Repeal Trim 😊
- Skinny Repeal Trim
- Biomechanics of this Style of Trim (Skinny Repeal) 😊
- ▼ air compression on down stroke gradual loss of elevation (more stall but able to move wings more quickly)
- ▼ resistance on upward stroke (more rapid wing movements)
- Wings move faster in both directions
 - ▼ velocity with ▲ wing movement = more exercise in a shorter period of time
 - Active control of landing impacted by feather length 🦋
 - Normal flight posture 🦋
 - Variable tip length to ▼ / ▲ flight
 - In 5 years of performing this type of groom
- Birds don't poke themselves. Less picking and feather rachis shredding?
- ▼ broken blood feathers- new feathers protected
- ▼ trauma to tail vertebrae & feather ▼ osteomyelitis/nerve impingement
- Molt cycle maintained/ normal torque germinal disc (where feather attaches to blood supply)
- No fractured beak tips, fracture keels, legs, lacerations, head trauma
- Less psychological effects/confidence because more function is maintained
- Less client guilt- more aesthetically normal
- Better responses to noxious stimuli and desires—More 🦋
- Not trimming feathers at all should always be considered when plausible.
- Flight Ethics---A Compromise
- As the veterinarian
 - Lead the conversations but listen
 - Be a patient advocate
 - Compromise is often necessary