

Animal husbandry the importance of correct handling techniques biology essay



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In order to successfully manage animals, especially when that management requires direct contact, it is necessary to understand the responses of animals to frightening or disturbing situations (Anderson and Edney, 1991). Animals will often have difficulties in coping with contact from humans and their responses will frequently be similar to a dangerous predator. Previous experience of a situation therefore plays an extremely important role in determining what the effect of human contact on an animal will be, and, as already demonstrated on laboratory, companion and farm animals, an animal will be substantially easier to restrain if it has previously been treated well and handled carefully (Anderson and Edney, 1991).

HANDLING AND RESTRAINT

Animals are restrained and handled by humans for many reasons, including for medicinal administrations and treatments, examinations, health checks, grooming, and bathing (Williams, 2009). The main objective of restraint is to handle an animal in such a way that a procedure can be done without injuring the animal and without causing any injury to the humans involved in the procedure (Ballard and Rockett, 2009).

It is only through an enlightened understanding of restraint principles that humane handling with the least amount of stress will be possible for any animal.

PREPARATION

Planning and preparation is essential.

The restrainer should plan carefully and anticipate problems, thinking through in detail each section of the procedure. A written plan may be necessary for the novice. In any case, possible counteractions should be planned for every conceivable contingency. Think safety-first, for people involved in the procedure;

second, for the animal. Consider whether or not the designed procedure will permit completion of the necessary task.

Animals may become overstimulated with an epinephrine rush during restraint procedures. They may be inclined to, and capable of, feats of athleticism beyond imagination.

Consider all aspects of the environment in which the restraint procedure is to be performed. Maintenance of facilities and equipment must be routine.

PHYSICAL FORCE

The hands are used in most manipulative procedures; the wise restrainer takes every precaution to protect them. The hands may be used alone to grasp an animal. The restrainer must know where and how to grasp the animal to be protected and to accomplish the restraint required. The pressure required varies with the species. Handling

a 50-g parakeet is indeed different than holding onto a 12-kg macaque. The amount of force applied must be appropriate to the species. Suffocation may result from the application of too great a pressure. Limbs or ribs may be fractured by applying too much force.

CHEMICAL RESTRAINT

Chemical restraint has been the single most important contribution to the art of animal handling that has occurred in recent years. It enables one to manipulate some species of animals that heretofore simply could not be handled. Many different agents are used for chemical restraint. None of them are satisfactory in all cases. Each has its indications and limitations and each must be used with judicious understanding of what it can and cannot do. Perhaps the greatest evil of the chemical restraint era is for the novice to assume that all that

is required to solve all restraint problems is a drug, a syringe, and some method to inject it into the animal. Such is emphatically not the case.

BEHAVIOUR

An understanding of animal behavior is crucial to the successful application of restraint procedures with minimal stress.

Restrainers must first understand normal to detect abnormal. Behaviors to be emphasized for restraint purposes

are methods of offense and defense, communication (vocalization, body language, facial expression), hierarchical status, locomotion, recumbency, and getting up and down.

BEHAVIORAL CHANGES ASSOCIATED WITH RESTRAINT

Knowing normal behavior allows evaluation of the emotional and physical status of an animal before, during, and after restraint procedures. Many of the behavioral changes are an exaggeration of normal behavior.

TRAINING

Modern animal management practices require that the stress (distress) of any procedure be minimized to optimize animal welfare. Training is the pathway by which the animal becomes accustomed to a procedure in a methodical manner. Domestic animals require training for their well-being and optimal interrelationship with people. There is a marked difference in handling range cattle compared to dealing with a herd of dairy cows that are being milked twice daily. Modern animal management programs emphasize training based on positive reinforcement that makes the animal a willing participant in the handling procedures.

STRESS

Stress is ever present in both free-ranging and captive wild animals. It is crucial that stress remains at levels that are beneficial to the animal and do not rise to become distress, which is detrimental to animal well-being. Veterinarians providing health care for any animal should consider stress as a contributory factor in specific diseases. Husbandry practices should be evaluated and correction of those that may be harmful recommended. Some wild animals are social animals. Isolation for therapy or recuperation may be counterproductive.

Malnutrition is a stressor, as are repeated and prolonged restraint episodes.

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Reduced resistance to disease is an ill-defined consequence of restraint stress.

WELFARE

All animals maintained in captivity should be treated humanely and provided with potable water, nutritious food, proper handling, health care, and a proper environment. Furthermore, all animals should be treated with respect. Fear, pain, suffering, and distress should be kept to a minimum. From a humane and moral standpoint, the minimum amount of restraint consistent with accomplishing a necessary task should be used. Animal Welfare: Providing for the physical and mental wellbeing of an animal.

Animal welfare must be a constant concern of those who restrain animals. The well-being of an animal should be given the highest priority.

and to avoid any detrimental effect to that animal's welfare to protect from pain and suffering (Animal Welfare Act 2006).

MEDICAL PROBLEMS

Persons who are responsible for restraint procedures must be continually alert to prevent or deal with medical problems or emergencies arising during restraint. Emergencies may arise even under ideal conditions. The behavior of any animal is unpredictable when it is excited as a result of a restraint procedure. Injuries

may occur or metabolic changes, inapparent to the eye, may take place.

Either or both may result in incapacitation or death.

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TRAUMA

Internal hemorrhage is not visible to the eye, but the consequences are equally as dangerous as those of external hemorrhage.

Lacerations are a common result of restraint procedures.

Many species are easily fractured during restraint procedures. Extreme care must be exercised to minimize the pressures exerted on fragile bones by heavy-handed restrainers.

Abrasions are frequently caused during restraint and may be self-inflicted through escape attempts.

GLOVES - Gloves reduce tactile discrimination and frequently result in the handler squeezing tighter than necessary to restrain an animal. Tiny species can be easily injured in this manner.

SPECIAL PROBLEMS

Infant animals are subject to special problems during restraint procedures. Youngsters are much more liable to trauma because of their size and inexperience. Infants are easily crushed, gored, trampled on, and bitten by pen mates or cage mates or even by the dam, who may be excited by capture operations.

Wild species under stress may exhibit drastic behavioural changes. The mother's protective behavior may become so aggressive that she kills the infant. It is wise to separate young animals from larger specimens before attempting to capture either.

Young animals are more susceptible to heat and cold stress than are adults. Intense excitement places added burdens on the young. An infant prevented from nursing the mother for an extended period may develop hypoglycemia. Furthermore, a drugged or excited mother may suffer temporary or even permanent agalactia, causing the infant to suffer from malnutrition subsequent to the restraint procedure. If at all possible, postpone shipping until after weaning so that young and their larger dams may be crated separately.

HUMAN INJURY DURING RESTRAINT

Trauma to restrainer or assistant is common during restraint procedures. Be prepared to administer first aid.

Lacerations, contusions, abrasions, fractures, concussions, bite wounds, and kicks are all consequences of failure

to adequately prepare for a restraint procedure. 4 In almost every instance, a human mistake precedes an injury.

EXAMPLES

Many nonpoisonous snakes (Fig. 30. 38) will not bite unless tormented. The head of a large nonpoisonous snake must be controlled, particularly when

manipulating for examination (Fig. 30. 39). When holding a snake it is important to support the body (Fig. 30. 40). An unsupported snake becomes insecure and restless and may thrash about. If the body is left dangling, a vigorous snake may thrash until its neck is dislocated or fractured. One cribo held by the neck thrashed so vigorously that the vertebral column was fractured.

Snake hooks are fundamental tools for working with reptiles (Fig. 30. 44). Hooks may be used for directing movement, lifting snakes from containers (Fig. 30. 45), and a variety of other restraint procedures. A snake hook may be used to pin the head of any snake to the ground, allowing the handler to safely grasp it (Figs. 30. 46, 30. 47). Only sufficient pressure to hold the snake should be exerted; too much pressure on the neck may seriously injure the spine or dislocate the head. Furthermore, if a manipulation is rough, a snake may subsequently refuse to eat, even to the point of starvation. Grasp the neck and head as illustrated (Figs. 30. 48, 30. 49).

Rabbits

Rabbits are usually kept in small cages or a hutch. A domestic rabbit may be grasped by the loose skin over the

shoulders (scruff) (Fig. 17. 1). Cradling the hindquarters with the other hand provides added support (Fig. 17. 2) and may prevent the rabbit from kicking backward and possibly fracturing its spine in the lumbosacral region as it is lifted. Small rabbits can be picked up in the same manner as puppies and kittens, by the scruff without supporting the hindquarters. Do not pick up a

rabbit by the ears since this inflicts needless pain and causes the animal to
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struggle violently to free itself, even to the point of fracturing its neck. Most rabbits may be carried with their head tucked under the handler's upper arm and their body lightly supported by the hand and forearm (Fig. 17. 3, bottom and top). When returning a rabbit to a cage, set the rear quarters down first, with the head facing the door.

Alpacas

Alpacas are the most social of the camelids, and a herd should be handled as a unit until selected individuals are

grasped. Many alpacas have been taught to accept a halter and be led, but others may be physically restrained by holding them as a sheep or a foal would be held. Place an arm around the chest and grasp the base of the tail with the other hand, as shown in Figure 14. 33 or alternatively as illustrated in Figure 14. 34.

Life stages - young, pregnant, old

Physical/mental states - illness

Welfare act - Freedom from pain/discomfort

What research already exists

Why and when handle - veterinary procedures, cleaning, companionship, enrichment, moving/transporting/relocating

Choose particular examples - Include pictures (me?)

Safe lifting/heavy loads (health and safety)

Outcome 1

Investigate and demonstrate correct animal management techniques

Evaluate factors relevant to safe and effective animal handling and management

Select and undertake appropriate animal handling and restraint techniques

Correctly assess animals' physical and mental conditions and undertake appropriate routine management

Explain and undertake dietary management to suit a range of physiological requirements

Vet Clin North Am Food Anim Pract. 1987 Jul; 3(2): 323-38.

Animal handling.

Grandin T.

Abstract

Handlers with an understanding of animal behavior can handle livestock more efficiently and safely than handlers that lack an appreciation for the behavior of animals and their welfare. For example, four good handlers in a well-designed circular cattle-handling facility with a hydraulic squeeze could place an ear implant every 15 seconds or brand, vaccinate (up to four injections), place an ear implant, and castrate one animal every 45 seconds.

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Handlers that yelled at and prodded cattle excessively usually required more time to process each animal, due to wasted time when excited cattle escaped or became jammed in the squeeze. Veterinarians should teach clients the principles of animal behavior that relate to animal handling. Quiet, efficient handling will reduce stress and injuries to both people and livestock.

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