



## Review on Considerable Factors and situations for Physical Restraining and Handling of Equine and Bovine

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**Abstract:** Restraint and handling varies from confinement in an unnatural enclosure to complete restriction of muscular activity or immobilization. These can be achieved with the utilization of physical restraint and chemical restraint is now the time being is on practiced. This review is to simplify and collect under one review discussions and illustrations of the principles of animal restraint, restraining and handling and to describe some restraint practices for diverse species of domestic animals. It is hoped that this review will satisfy that need for all who handle animals particularly veterinarians; animal caretakers; wildlife biologists; wildlife rehabilitators; personnel of zoos, research, and humane society facilities; and any others who deal with animals.

[Getinet A, Maradona B, Melesse G, Getaneh Z, Temesgen T. **Review on Physical Restraining and Handling of Equine and Bovine.** Nat Sci 2021; 19(10):47-49]. ISSN 1545-0740 (print); ISSN 2375-7167 (online). <http://www.sciencepub.net/nature>. 7. doi:[10.7537/marsnsj191021.07](https://doi.org/10.7537/marsnsj191021.07).

**Key Words:** Restraint, Equine, Bovine, Handling

### 1. Introduction

Everyone must agree that domestic animals require transporting, medicating, and handling. To conduct such requirements of the animal for specific situation operators need to restrain and handle by the means of verbal, physical or chemical restraints (Riebold, 2007). A person who undertakes to restrict an animal's activity or restrain the animal is assuming a responsibility that should not be considered lightly (Schweitzer, 1965). Each restraint incident has some effect on the behavior, life, or other activities of an animal. From a humane and moral standpoint, the minimum amount of restraint consistent with accomplishing the task should be used. This should become a maxim for persons who must restrain animals (Fowler, 1995).

### 2. Why we need to restrain?

Domesticated animals which are under the supervision of human being so they need different husbandry practice (Porter, 2002). To be successful in working with animals the necessity of restraining is high. To be successful in working with animals with the utilization of restraining, one must understand their behavioral characteristics based on species, breed, sex, age, physiological status, environmental situation, and the other aspects of their psychological makeup that will allow for provision of their best interests (Hafez, 1968). To perform the following activities; clinical examination, artificial

insemination, pregnancy diagnosis, assisting delivery, medical treatment (medication), applying operation and surgical treatment, to clean/wash, milking, applying accaricides for parasitic infestation (Leahy and Barrow, 1954). Successful restraint operators must understand and have a working acquaintance with the tools of restraint. They must understand the use of voice, manual restraint, and chemical restraint (White, 1912).

### 3. Considerable Questions to Restrain

Each time the person who stands to restrain animal should propose the following questions which are should first asked to restrain an animal: (1) Why must this animal be restrained? (2) What procedure will produce the greatest gain with the least hazard? (3) When will it be most desirable to restrain the animal? (4) Who is the most qualified to accomplish the task in the least amount of time and with the least stress to the animal? (5) What location would be best for the planned restraint procedure? (White, G.R. 1912)

### 4. Factors to selection restraining technique

During the selection of the appropriate restraining technique for the appropriate animal and operation to be conducted should be considering the four basic factors: (1) Will it be safe for the person who must handle the animal? (2) Does it provide maximum safety for the animal? (3) Will it be

possible to accomplish the intended procedure by utilizing the suggested restraint method? (4) Can an animal following restraint until it has fully recovered from the physical or chemical effects? Once these four factors are evaluated, a suitable technique can be selected (Porter, 2002, Fowler, 1995).

### 5. Tools of Restraint

Restraint levels may vary from the level achieved by (1) arousing the subordinate feelings of an animal by voice and/or (2) force of personality to the level of complete physical or (3) chemical immobilization (hypokina). Tools used in effecting a given degree of restraint vary greatly. Some tools may be desirable for dealing with one species and be contraindicated when working with another. Success in the art of restraint requires both experience and study to know when it is appropriate to use a specific

constant observation and attention be given the type of restraint. Inappropriate use of certain techniques may be not only unwise but dangerous to animal or human being (Fowler, 1993).

### 6. Seven Categories Tools & Restraints

For ease of discussion, the tools have been placed into seven categories: (1) psychological restraint-understanding a certain biological characteristic enables more satisfactory manipulation of a given animal; (2) diminishing sense perceptions of animals; (3) confinement; (4) lending added strength to or extension of the arms; (5) physical barriers used to protect us or allow closer scrutiny of animals; (6) physical force-used to subdue animals; (7) chemical restraint- used to sedate, immobilize (Sheldon., *et al.* 2006).

Table. Restraints of equine & bovine (Sheldon *et al.* 2006, Cockrill, 1974 and Sonsthagen, 1991).

| Restraints and Restraining Techniques                          |                               |
|--|-------------------------------|
| Equine   | Bovine                        |
| Rope halter  | Rope halter                   |
| Triple-stitched leather halter                                 | Nose ring                     |
| Chain shank through the mouth                                  | Bull holder                   |
| Ear twitch   | Chain hobbles for dairy cows  |
| Lifting a foreleg  | Leg lifting                   |
| Foal relaxing and slumping to the ground Sideline using hobble | Tailing a cow                 |
| Cradle.  | Tail tie on cow               |
| Lifting hind leg   | Half-hitch method of casting  |
| Wrapping   | Criss-cross method of casting |

### 7. Hazards During Restraining

The probable hazards on the operators, bystander, assistant in the operation area may be faced to deferent types of hazards that can be which is associated with the animal. Those hazards can comprise: (1) physical hazard (biting, kicking, and horning, scratching), (2) chemical hazards (urine irritation to eye), (3) biological hazard (bacterial, parasitic, fungal, viral disease spread) (White, G.R. 1912).

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### Reference

- [1]. Cockrill, W.R. 1974. Husbandry and Health of the Domestic Buffalo, p. 281. Rome: Food and Agriculture Organization.
- [2]. Fowler, M.E. 1993. Veterinary Zootoxicology. Boca Raton, Florida: CRC Press.
- [3]. Fowler, M.E. 1995. Restraint and Handling of Wild and Domestic Animals. Second Ed. Ames, Iowa State University Press.
- [4]. Hafez, E.S.F. 1968. Adaptation of Domestic Animals, pp. 38-45. Philadelphia: Lea & Febiger.
- [5]. Leahy, J.R., and Barrow, P. 1954. Restraint in Animals, 2nd ed. Ithaca, N.Y., Cornell Campus Store.
- [6]. Porter, V. 2002. Mason's World Dictionary of Livestock Breeds, Types and Varieties, New York, CABI Publishing.
- [7]. Riebold, T. 2007. Ruminants. In: Tranquilli, W.J., Thurman, J.C., and Grimm, K.A., Eds.

2007. Lumb and Jones' Veterinary Anesthesia and Analgesia, 4th Ed. Ames, Iowa, Wiley-Blackwell Publishing, pp. 731–47.
- [8]. Schweitzer, A. 1965. The Teaching of Reverence for Life. New York: Holt, Rinehart and Winston.
- [9]. Sheldon, C.C., Sonsthagen, T., and Topel, J.A. Animal Restraint for the Veterinary Professional. 2006. St. Louis, Mosby/Elsevier, 239 pages.
- [10]. White, G.R. 1912. Restraint of Domestic Animals, Second Ed. Nashville, TN, Williams Printing.

9/4/2021