

# Critical problems faced by permanently tethered cattle on hard floor



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Elsa Foundation is a non-profit charitable trust that focuses on conservation of biodiversity, prevention of cruelty to animals, animal rights issues of both domestic and wild animals. It opposes keeping wild animals in captivity.

We have travelled to several countries to study best practices and implement them in India.

The foundation supports various government bodies, in informed policy-making and decision-making on critical issues impacting biodiversity and the rights of animals.

Our work areas are research, advocacy, awareness, publication, support in policy and decision-making.

**Important:** Elsa Foundation does not operate an animal hospital, shelter (or) an ambulance. In case of medical emergency for animals, immediately contact a veterinary doctor nearby.

**Website:** [www.elsafoundationcharity.org](http://www.elsafoundationcharity.org)

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## **1 INTRODUCTION:**

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In many places cattle is tethered with a short rope / chain permanently without any access to open pasture or exercise or grazing. There is a huge negative impact on physiological and psychological well-being of such cattle. This document analyses the problems faced by such cattle and also provides recommendations for improving the living conditions.

## **2 THE FIVE FREEDOMS:**

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Before any one attempts to own animals, they must thoroughly understand the scientific facts related to animals on biological, physiological, ethological and psychological aspects.

Having animals without understanding these facts (or) without having proper knowledge (or) without doing a deep study in these animal sciences will lead to miserable living conditions of animals in all these aspects.

Captive animals' welfare is assessed by the principles of five freedoms

1. Freedom from thirst and hunger
2. Freedom from discomfort
3. Freedom from pain, injury and disease
4. Freedom to express normal behavior
5. Freedom from fear and distress

The observations presented here are also based on above principles.

Key points on critical problems that occur, if cattle are tethered permanently on a hard concrete floor, is presented here. Data is extracted from various scientific studies.

## **3 TETHERING:**

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Some cows are kept in tie-stalls, which involve severe confinement. Each cow is tethered by either a chain, stanchion (metal bars) or rope tied around the neck, for up to 24 hours a day throughout her life. Tie-stalls restrict every aspect of cows' behaviour; they are unable to socialise, exercise and may even be unable to turn and scratch themselves.

## 4 PHYSICAL PROBLEMS:

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### 4.1 LAMENESS

Cows may go lame due to various conditions associated with bacterial infection, such as hoof lesions, sole ulcers, laminitis and digital dermatitis. Lameness causes pain and discomfort. Cows suffering from lameness develop hypoalgesia and alter their behaviour in an attempt to relieve the pain by changes in body posture, reduced walking activity, and more frequent shifts of their weight from one leg to the other.

#### Factors that cause Lameness

- Hoof lesions are a main cause of lameness.
- Lameness is caused by poor quality floors, ineffective foot trimming, poor nutrition and prolonged standing on concrete floors.
- Lameness has also been related to insufficient physical activity.
- Infections happen when cows stand in urine and feces.
- Concrete structures affect bones and joints. These structures break down over time because the cows never experience any relief.

Studies have shown that increased exercise and access to pasture can improve cow gait and may have a positive effect on hoof health.

True animal lovers tend to cows and other animals with love and care. They treat lameness and other conditions so the animals can thrive. While it's important to limit human interference with the animal kingdom, humans and other animals can live in harmony and companionship.

Dairy cows, unfortunately, never experience this relationship. On a factory farm, dairy cows are materials on a factory line.

#### Lameness primary cause of death:

In a survey of the primary causes of cow deaths, lameness or injury ranked highest at 20%, followed by 16.5% due to mastitis and 15.2% as a result of calving problems.

### 4.2 NOT BEING ABLE TO MOVE FREELY

You might have experienced stiff joints and sore muscles after standing, sitting, or lying in the same position for too long. Our bodies have pressure points that, when tested too much, signal for us to move due to pain.

Cows are very different physiologically from human beings, but like people, dairy cows need to move around to stay healthy. They must exercise, move their joints, build their muscles, and experience relaxation. Dairy cows are denied those rights.

### 4.3 NON-AMBULATORY COWS (DOWNERS PROBLEM)

Non-ambulatory cattle—referred to as “downers” by the industry—are animals who collapse for a variety of metabolic, infectious, toxic, and/or musculoskeletal reasons and are too sick or injured to rise.

Poor management and maintenance of dairy facilities also places cattle at increased risk for becoming Non-ambulatory. Providing proper bedding, for example, is considered critical for downer prevention. Surfaces like concrete also minimize chances of recovery by contributing to the pressure damage associated with immobility in such heavy animals; **as a bedding material, concrete is considered “extremely dangerous.”**

Facts: [75% of downed animals](#) (Click in the link to read the research article) —animals who cannot stand and walk on their own—are dairy cows.

## 5 PREVENTION OF FOOT PROBLEMS IN CATTLE:

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### 5.1 BEHAVIOUR AND STRESS

Prolonged standing causes sore feet that can become susceptible to disease.

Mechanical development of hemorrhaging and/or ulceration can also occur in heifers (cows) simply as a result of trauma incurred from being transposed from earthen lots to concrete floors.

Any management practice that imposes stress on animals can deplete the body’s nutrient reserves. Stress can reduce the animal’s resistance to disease and can be a factor in lameness.

Management practices such as vaccination, transportation, and reduced exercise can impose stress.

### 5.2 STALL COMFORT

Soft bedding is essential. Sand is optimal stall bedding, providing cows comfort and traction. In addition, sand must be free of small stones, which can penetrate the sole horn.

## 6 SOME OF THE PROBLEMS TO FOOT AND LEG – PHOTOS:

**Figure 9. X-ray of an infection of the coffin joint.**

**Note the assymetric swelling of the surrounding tissues (yellow arrows) relative to the long axis of the midline (dotted line).**

**Also note the destruction of bone around the joint (white arrow).**

**The coffin joint of the unaffected digit is shown with the green arrow.**



**Septic Arthritis**



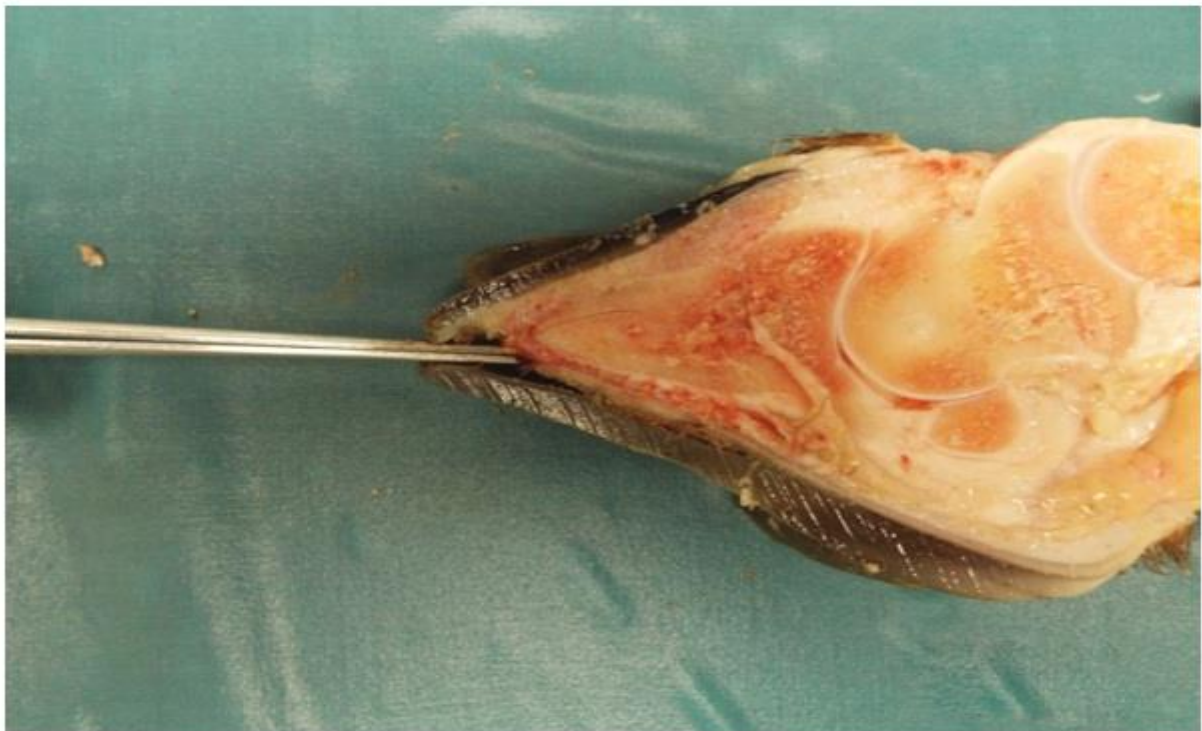
**Hoof Elongation and Curled claws**

**Can sometimes accompany severe cases of laminitis (or) founder**

Toe tip necrosis – Outside and cross section view



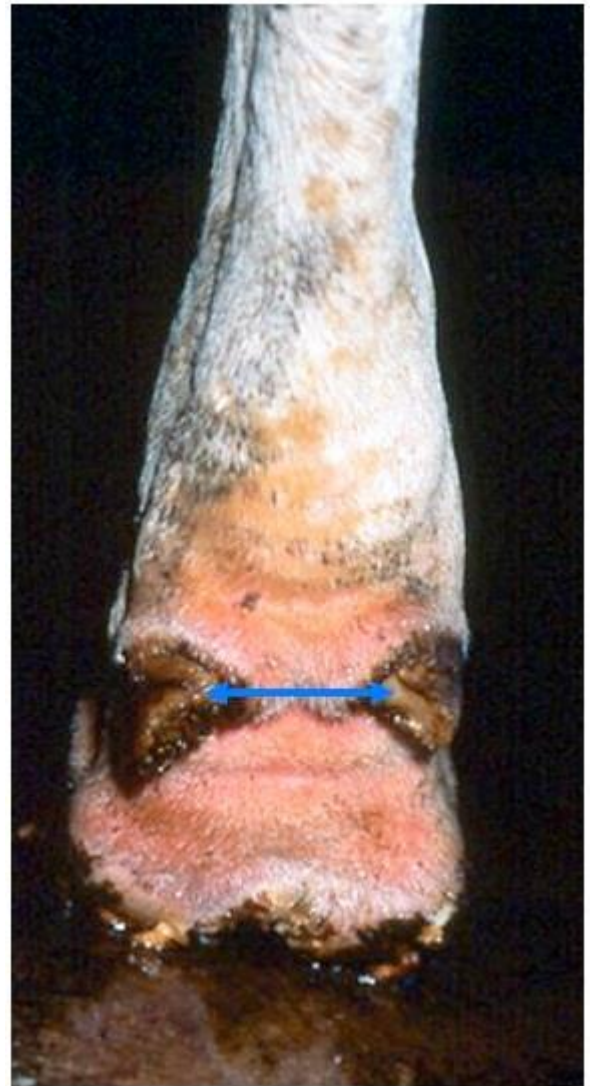
Pressure builds as an abscess forms in the toes of a hind foot when toe tip necrosis infection is present. (Photo courtesy of Murray Jelinski).



A cross-section of the hoof demonstrates separation between the hoof wall and the white line in an animal affected by toe tip necrosis. (Photo courtesy of Murray Jelinski).



Above: Digital Dermatitis



Right: Declaw separated due to swollen foot

Below: Foot rot





**Deep  
Infection**

**Below:  
Swollen  
Joint**



A swollen joint can cause lameness and become a serious health and welfare problem.

## 7 GRAZING:

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Cows need access to pasture with plenty of space and opportunity to graze. This is important for their physical and mental well-being, and their ability to perform natural behaviours

On pasture, dairy cows graze throughout the day, but in modern dairy production, cows may only be briefly fed once or twice daily. There are indications that the duration of feeding time and the feeding behaviour itself are important for the well-being of cows, as is the composition of feedstuffs.

Cattle are ruminants that naturally graze or browse on grasses and other vegetation.

## 8 TETHERED CATTLE PSYCHOLOGICAL PROBLEMS:

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Most cows used for dairy production are kept indoors, with some having access to outdoor concrete or dirt paddocks. Many are tethered by chains or other materials around their necks in what are called “tie stalls.”

Cows kept in tie-stalls are confined except when they are milked, severely limiting natural activities such as walking, exploratory behavior, and grooming and licking their hindquarters. Research has shown that tethered cows behave abnormally to compensate for their barren environment through oral manipulation of stall components, increased sniffing and licking of the equipment or the ground, increased sniffing of neighboring cows, and more leaning against equipment.

### 8.1 WHY CATTLE NEED EXERCISE

Exercise is needed for both physical and psychological well-being of animal.

Research shows that cattle that are not involving in physical activities are affected by calving-related diseases, mastitis and several leg problems.

Exercised cows are healthier than non-exercised cows. Exercise is important for stimulating blood flow through the feet and keeping the tissues healthy. Too little exercise can cause sluggish blood flow, edema, and swelling.

#### Improvement after exercise:

Allowing these cows just one hour of exercise daily improved the frequency of normal social, grooming, sniffing, and licking behavior. A number of studies have also shown that cows are highly motivated to exercise. Compared to cows allowed regular exercise, cows who have been restricted from exercising exhibit increased play behavior when released into a paddock, walk and trot more, and show increased exploratory and self-grooming behavior. This indicates insufficient opportunities for exercise are provided in conventional intensive dairy.

### **8.1.1 Behaviour study**

#### **Title: Behaviour and claw health in tied dairy cows with varying access to exercise in an outdoor paddock**

Adult dairy cows used the time to walk, trot and explore the environment when given access to an outdoor paddock, and that exercise had a positive effect on the claw conformation.

Non-exercised cows tended to develop more heel horn erosion and less dermatitis. This is supported by Andersson and Lundström (1981) and Bergsten and Pettersson (1992) who also found tendencies for tied cows to develop more heel horn erosion and less dermatitis during the housing season.

The longer diagonal in non-exercised animals and more heel horn erosion is logical as it indicates a relatively lower heel and more exposure to dirt than animals with a shorter diagonal. A significant association between foot dirtiness and heel horn erosion was found although there were no differences between groups. Cows with little or no exercise spent more time in the tie stall where the claws are more exposed to manure and urine, while cows exercised every day had the opportunity to clean the claws in the paddock.

Exercised cows are healthier compared to non-exercised cows.

Although the cattle will have spent time grazing in fields prior to fattening, some will be confined in pens for around a quarter of their lives, until they are slaughtered.

## **8.2 EXTREME STRESS**

Stress also comes from the crowded conditions, the often-abusive interactions they have with humans

If you've ever had a stressful experience, you know what it did to your body and mind. You might have felt weak, tired, vulnerable, anxious, depressed, and/or frustrated. Perhaps you couldn't eat, sleep, or relax.

Cows experience the same things when overly stressed.

Other factors that cause stress:

- In-convenient flooring system
- Reduced lying or resting has been associated with increased stress. Studies show that lying is higher priority than eating

### **8.2.1 Flooring and stress**

Apart from stress, improper flooring will also result in reduced levels of growth hormones; and changes in the frequency of behaviours such as eating, grooming, and idling, and the development of hoof lesions that cause lameness.

A study in which cows' priorities were quantified found that lying is very important to cows and has a higher priority than eating or social contact.

Cows prefer to lie on soft surfaces rather than on hard ones, favouring, for example, to lie on a wood chip pad rather than concrete or gravel. The total lying time may also improve when bedding materials such as sawdust are added to the mattresses in free-stalls.

### 8.3 IMPACT OF SOCIAL ISOLATION AND RESTRAINT

Cows tethered in tie-stalls have few opportunities for social contact. The stress of physical restraint and social isolation can be measured by an increase in plasma cortisol and may lead to a phenomenon called **hypoalgesia**, which is an increase in the pain threshold that has been observed in many species after exposure to stressful and painful experiences.

Dairy cows are separated from their herd mates, so they can't form natural bonds, and they are injected with hormones and other additives to help them produce more milk.

#### 8.3.1 Family relationship of cattle

When we think of cattle, we imagine a huge animal grazing in green fields, exposed to natural sunlight and fresh air. These cattle normally have lifespan of 25 years and more. Cattle are social animals with distinct personalities and generally interact with their peers in complex ways. Relationships, especially between sisters and mothers and their female offspring, are particularly close.

#### 8.3.2 How long do dairy cows live?

One of the greatest injustices inherent to the dairy cattle industry is the reduced lifespan for cows involved in it. A cow in a **natural environment**, with access to adequate nutrition and hydration, **can live for 20 years or more**.

Even companies in the industry, such as [Alberta Milk](#), admit that dairy cows live an average of **just five years**. Many don't even reach their fifth birthdays, and all are raised for the intention of providing milk — not for their young, but for human consumption.

This reduced lifespan might seem merciful. After all, now that you're aware of how dairy cows live, would you want to endure that abuse and neglect? However, all sentient creatures deserve a chance at life. By crippling these animals, we deny them that.

#### 8.3.3 Entire life of confinement

No animal — dairy cows included — is built to spend a life in confinement. Cows need to roam, explore the world, find fresh grass, locate water sources, and tend their young.

By treating them like lactose vending machines, factory farmers destroy the animals' spirits and prevent them from experiencing the world as they were intended. Unfortunately, millions of cows endure this treatment, but there's nobody to save them.

### 8.4 STEREOTYPES – PREVENTING GRACING - PSYCHOLOGICAL PROBLEM

Research has found that the short duration of feeding in industrial production may lead to the development of oral stereotypies. Stereotypies are abnormal, repetitive behaviour patterns with no obvious goal or function. In cattle, these are characterized as repeated rolling of the tongue, bar biting, and licking of the stable equipment, which may be manifestations of the frustration associated with the deprivation of grazing behaviour. Even if the feed ration contains all required nutrients, the cow may still have a behavioural need to perform oral manipulation of the feed, as would be normal under natural conditions.

## 8.5 LIVING IN THEIR OWN WASTE

Manure and urine are extremely toxic. You wouldn't want to stand in your own excrement all day, yet dairy cows face this treatment for their entire lives.

They get acute respiratory distress from the ammonia that comes from urine, for instance. As manure decomposes further, it creates bacteria that can infect cows' hooves. Worse, if a cow sustains an injury, the open wound gets exposed to these biological hazards.

## 9 BASIC ANIMAL WELFARE:

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Federation of Indian Animal Protection Organisations

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### RED LINES FOR CATTLE DAIRIES

Certain parameters have been called "Red Lines" as they have been identified as basic animal welfare conditions that are non - negotiable for cattle in dairies. These are:-

- 1 Flooring and bedding** – Dairy animals have a strong behavioural need to rest and spend most of their time resting. They must have a comfortable resting space. The bedding areas of all animals must be clean and comfortable with non-slip flooring. Bare concrete is not an acceptable surface especially for resting.
- 2 Tethering of animals** – Dairy cattle must not be chained or tied throughout the day. If required, cattle should only be tethered for a short period of time (on a reasonably long tether so as to allow the animal to sit and stand comfortably) as and when required by a veterinary doctor, for other anomalous conditions or for milking.

### 9.1 WELFARE ASPECTS

Cattle should have access to pasture all year round, with the freedom to choose when they go outside or stay indoors. Housing should be well designed and cows should be given enough space for natural social behaviour. There should be plenty of bedding such as straw, so that cows have access to comfortable, clean spaces to rest. Diets should include plenty of fibre

## 10 CONCLUSION:

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There is a tremendous potential for increasing the welfare of cows in the dairy industry. Many of the housing problems can be prevented by increasing the available space, using appropriate bedding materials, and providing opportunities for exercise. Providing regular access to pasture and suitable high-fibre diets could help alleviate the health, stress, and behavioural problems associated with confinement and feed concentration.

## 11 RECOMMENDATIONS:

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It is very clearly proven using various scientific studies that tethering cattle permanently on a hard (or) soft floor is extremely harmful to the animal's physical and psychological health.

The cattle need to live in an agricultural farm in a large enclosure. It should be provided with several kilometres of walking and several hours of natural grazing opportunity every day.

Ungulate counterparts of domestic animals walk almost the entire day, grazing in the wild. This needs to be replicated in the domestic condition also.

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## 13 APPENDIX

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<https://www.ciwf.org.uk/farm-animals/cows/dairy-cows/>

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*Animal & Biodiversity Charity*

Critical  
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