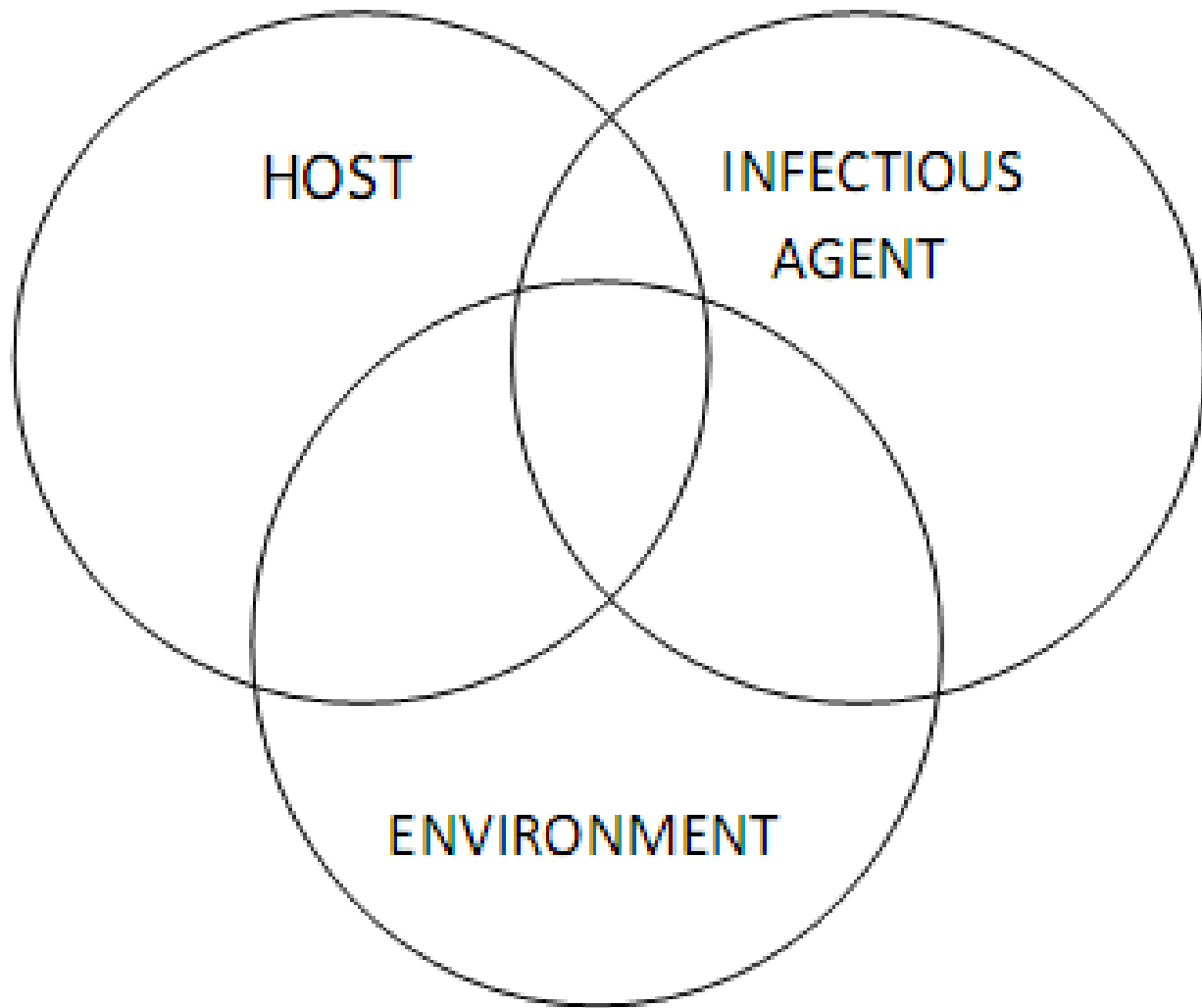


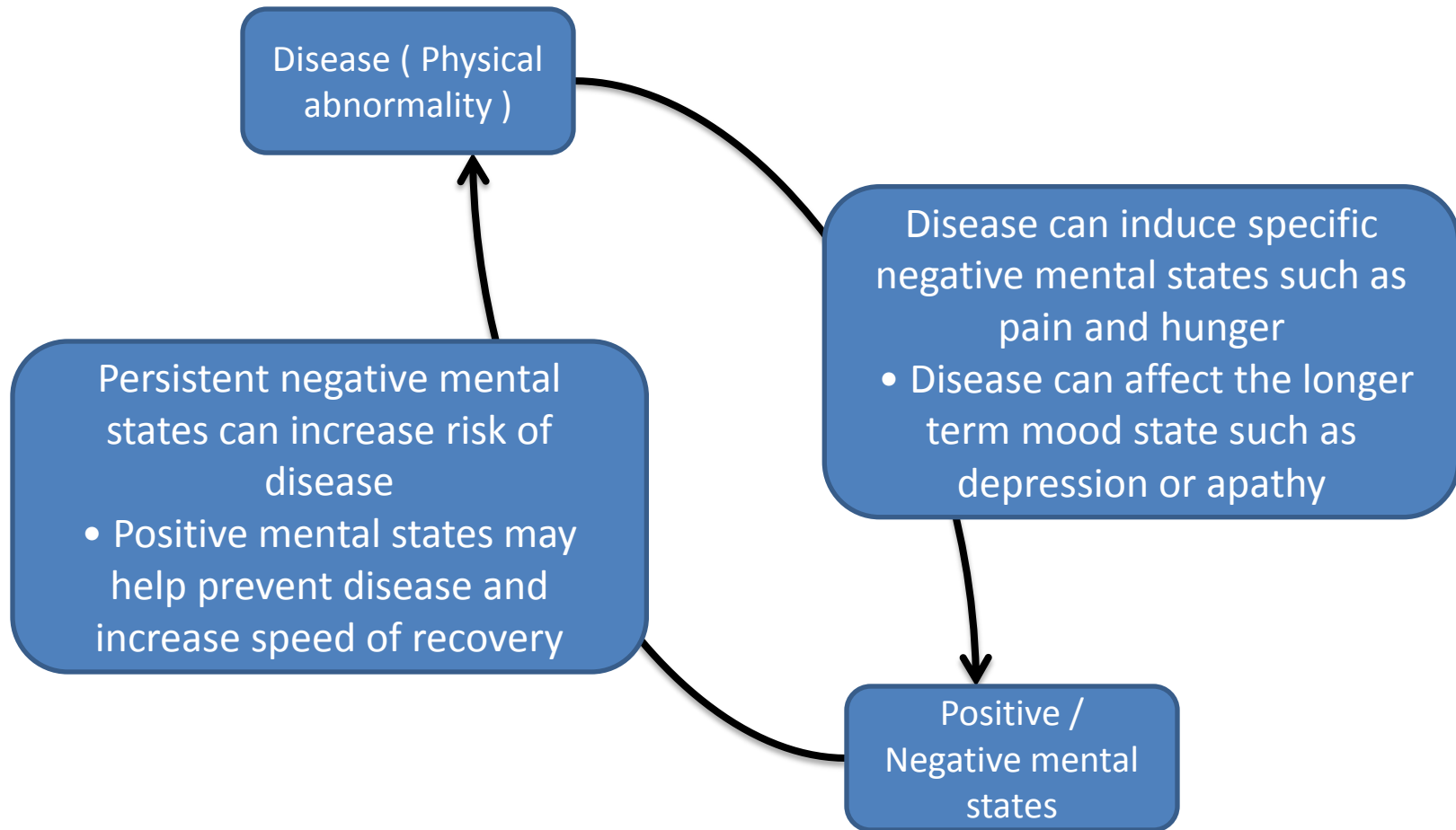
Welfare in relation to disease



- Disassembling the word into its components reminds us that **dis-ease** is often associated with discomfort, worry or anxiety. Few would doubt nowadays that to be concerned about an animal's welfare is to be concerned about its mental state as well as its physical state. The extent of suffering from poor health depends not only upon an animal's ability to cope with the adverse physiological impact from the disease but also the associated emotional consequences.

- Good physical health is essential to good welfare, but is not sufficient in itself because it does not necessarily lead to a good mental state. Conversely, poor productivity, e.g. infertility, may be indicative of an underlying disease but may not always be a cause of suffering.

The interactions between mental and physical wellbeing and disease



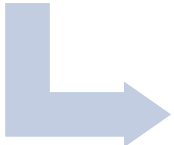
- Indirect effects of disease may include reduced physical ability to access feed, water or other resources and reduced motivation to express normal behaviours such as play. There may also be indirect effects of a disease on other animals in a group, such as an inability to suckle and to protect young or a disturbance in the hierarchy leading to negative interactions between group members.

- Animals which are diseased very often have difficulty in coping with their environment, or fail to do so, hence their welfare is poorer than that of healthy animal in otherwise comparable conditions.
- Whether the disease causes pain or other kinds of discomfort or distress, veterinary treatment which reduces the effects of the disease is clearly improving the welfare of the animal.

- It is important to emphasize that it is not the diagnosis of the disease which improves welfare but the consequent treatment.
- “ if fevered pneumonic calf, shivering in corner of a damp draughty barn, feels rotten and is in no way comforted by the fact that its condition has been diagnosed by a trained veterinarian”.
- “ if the consequence of disease diagnosis in an animal is preventive measures in the whole animal unit, the welfare of the animals already diseased is not improved”.

- One of the consequence of the poor welfare associated with the disease is that resistance to other diseases is reduced.

Difficult conditions



Poor welfare



Disease



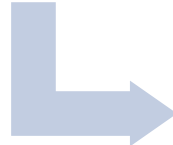
Worse welfare



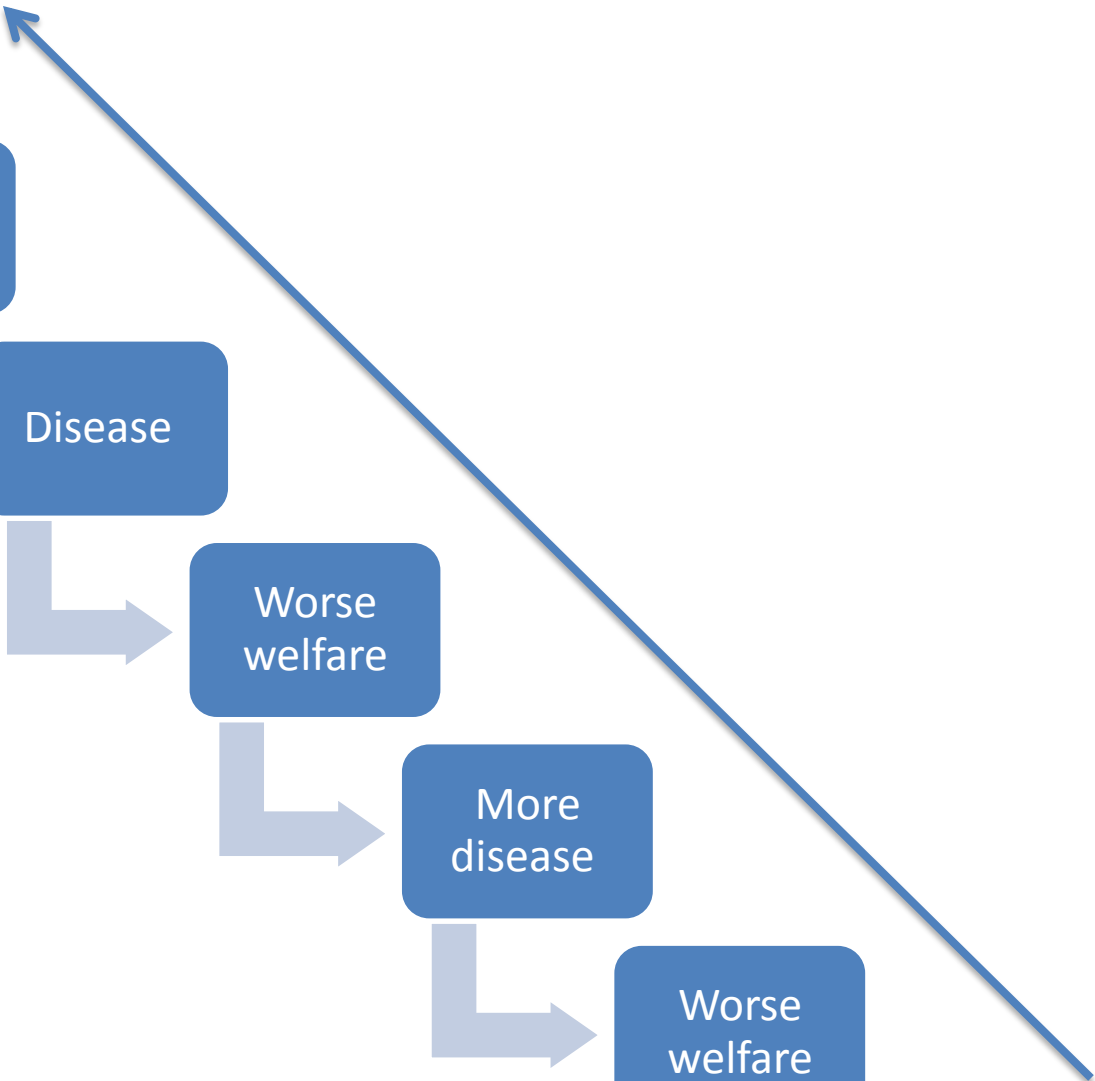
More disease



Worse welfare



Death



- Poor welfare can be a primary predisposition to ill-health. Poor environmental conditions, husbandry, housing or stockmanship, which can elicit physiological stress responses in animals, may affect health by altering the animal's susceptibility to pathogens.

Welfare and disease susceptibility

- A number of animals live in apparently similar conditions but only one or two show signs of disease, or most show signs of disease but only one or two die.
- The individuals which are affected more by disease are those which had looked weaker and less well able to cope with environment.

- For example: in group housing situations, the more susceptible animals are often those which are obviously at the bottom of a social hierarchy with the consequence that they are chased a lot, injured by others, excluded from favored places and sometimes prevented from obtaining an adequate diet.

Conclusions

- Disease can have either an infectious or non-infectious aetiology; it often has significant detrimental effect on the **Five Freedoms and animal welfare, both physical and mental**. When caring for animals the positive and negative effects of physical and mental health need to be considered. For example, a better understanding of illness and coping strategies could lead to better nursing of sick animals through the use of management practices such as improved hospital facilities that provide appropriate temperature, comfort, and isolation/group housing, according to the species.

- The health of animals depends on a dynamic balance between host characteristics, pathogen characteristics and environmental circumstances. Disease occurs when the balance between any of these three determinants is disrupted; causing an effect on the individual that is harmful to its normal function. A holistic analysis of all direct and indirect causal factors is necessary as part of the process to prevent or remedy disease situations.

- Disease has significant consequences for the efficiency and profitability of live-stock production.