

Preventing or controlling ill health from animal contact at visitor attractions

Includes a supplement for teachers and others who organise visits for children

HSE information sheet

Agriculture Information Sheet No 23(rev2)

This guidance is issued by the Health and Safety Executive. Following the guidance is not compulsory and you are free to take other action. But if you do follow the guidance you will normally be doing enough to comply with the law. Health and safety inspectors seek to secure compliance with the law and may refer to this guidance as illustrating good practice.

The information contained within this guidance is aimed at owners and managers of visitor attractions who have legal duties under health and safety law (dutyholders). It describes the measures dutyholders should take to protect visitors. Dutyholders will also need to ensure that they comply with their legal obligations to protect the health and safety of their staff, including their employees, volunteers, helpers etc.

Introduction

This information sheet provides advice for those responsible for premises where members of the public, including children, are encouraged to view, touch or pet animals. Visits to these sites are primarily for recreational or educational purposes.

Teachers and others who organise visits should also read the supplementary sheet which forms part of this advice, to help them make sure that children do not become ill as a result of visits. It may be useful to assist with the process of risk assessment, which should be carried out before the visit takes place.

Visits to premises covered by this guidance play a valuable part in the education and development of children and young adults, and provide an enjoyable experience for many people. It is unusual for members of the public to be made ill as a result of such visits. However, there have been a relatively small number of serious cases of ill health reported as a consequence of visits to premises.

Premises covered by this guidance include:

- farm attractions, eg open farms/farm parks;
- animal petting/handling enclaves within other attractions (including those at zoos etc);
- city farms or other educational establishments;
- working farms with livestock that occasionally open to the public, eg for school visits or to participate in 'Open Farm Sunday' or similar events;
- rare breed and rescue centres;
- agricultural shows or country fairs where livestock are present;
- travelling menageries or mobile animal petting/handling enterprises;
- other similar visitor attractions at which the public have contact with animals.

While the general principles covered in this document are equally applicable to zoos, specific guidance on managing zoonotic disease (disease passed from animals to humans) in zoos will be contained in *Managing zoonotic risk in zoos and wildlife parks* which is to be published shortly.

It should be assumed that animals at visitor attractions carry harmful micro-organisms such as *Escherichia coli* O157 (commonly known as *E coli* O157 or VTEC) and *Cryptosporidium parvum*. Therefore, as with many other activities, visits to such premises can never be considered free from all risk. However, implementing the control measures in this guidance will help ensure that the risk of infection from contact with animals is low.

'Hazard' and 'risk'

Throughout this guidance the term 'hazard' is used to describe anything with the potential to cause harm and 'risk' used to describe the chance or probability of harm occurring coupled with its severity.

Background

All animals naturally carry a range of micro-organisms, some of which can be transmitted to humans, in whom they may cause ill health, which in some cases may be severe or life threatening.

Much of this guidance refers specifically to the verocytotoxin-producing bacterium *E coli* O157 because it poses a serious hazard to the health of people visiting such premises. *E coli* O157 can potentially cause serious illness, especially in young children, in whom symptoms may include bloody diarrhoea and kidney failure.

Cattle and sheep are the main recognised carriers of *E coli* O157. The organism may occasionally be found in other animals, especially among the mixed species often present at visitor attractions. These include goats, pigs, chickens, horses, deer, llamas and alpacas. Farm dogs and wild rabbits can pick up the infection from an infected environment. Infection can also occur in birds such as wild geese. The organism is primarily transmitted through contact with their faeces (dung).

Another harmful micro-organism is *Cryptosporidium parvum*. This is a microscopic parasite carried by calves, lambs, deer and goats and can cause severe diarrhoea in young children and the elderly. It is capable of surviving for a long time in the environment.

People can become infected with *E coli* O157 or *Cryptosporidium parvum* through consuming contaminated food or drink, through direct contact with contaminated animals, or by contact with an environment contaminated with animal faeces.

Very low numbers of micro-organisms can cause human infection and so it is important that those responsible for the premises control the risks to visitors.

A number of essential control measures can help reduce the risk of people, especially children, becoming infected through contact with faeces and faecal material. These include:

- good general cleanliness around the premises;
- prevention of animal soiling on paths and walkways;
- containing animal bedding material within pens;
- the careful transporting and storage of manure;
- good animal husbandry;
- separating animal contact and non-contact areas;
- provision of adequate hand-washing facilities;
- information for staff and visitors; and
- proper supervision of animal contact and hand washing.

Controlling the risks from *E coli* O157 and *Cryptosporidium parvum* will also control the risks from most other organisms that are transmissible to humans by the hand-to-mouth route.

Precautions against other types of zoonoses are covered by HSE Agriculture Information Sheet 2(rev2) *Common zoonoses in agriculture*.

The law

The Health and Safety at Work etc Act 1974 and associated health and safety regulations place duties on a wide range of people (dutyholders). If you open your premises to the public, including for charity events, you will have duties under health and safety law.

COSHH

E coli O157 and other micro-organisms that may cause ill health are subject to The Control of Substances Hazardous to Health (COSHH) Regulations 2002 (as amended). These Regulations require an employer or self-employed person to:

- assess the risks to employees, self-employed people and the public from exposure to hazardous substances, including micro-organisms;
- prevent, or, where this is not reasonably practicable, adequately control exposure to the hazardous substances;
- introduce and maintain control measures;
- inform, instruct and train employees about the risks and precautions to be taken;
- inform visitors about the risks and precautions to be taken; and
- regularly review the assessment and the effectiveness of control measures.

Guidance on COSHH can be obtained from the HSE website: www.hse.gov.uk/coshh/index.htm

Assessing the risk

When undertaking your COSHH assessment you should:

- assume that all animals (including birds) carry micro-organisms such as *E coli* O157 that could represent a hazard to human health. Animals carrying infection can still appear healthy;
- remember that ruminants (eg cattle, sheep and goats) carry *E coli* O157;
- take into account that *E coli* O157 is also found in a range of other animals, including pigs, horses,

donkeys, deer, alpacas, llamas, cats, dogs, wild rabbits, chickens and other birds;

- recognise that, although tests are available to detect the presence of *E coli* O157 and other micro-organisms, a negative test result does not guarantee the animal is free of infection as infected animals do not shed the micro-organism all the time. Animals which have previously tested negative may begin to excrete the organism at a later date;
- acknowledge *E coli* O157 may be introduced to your premises at any time by new stock, wild birds and animals, or by visitors;
- bear in mind when selecting animals for animal petting/handling areas that young stock, stock under stress, or stock unfamiliar with people etc are more likely to excrete *E coli* O157; and
- accept that other animals on the premises, including pets, may acquire the bacterium through contact with faeces etc.

Exposure to *E coli* O157

You should assume that your animals carry *E coli* O157 even though they have no signs of this. The organism can be spread to humans by hand-to-mouth contact, eg hands contaminated with *E coli* O157 from faecal sources coming into contact with the mouth. Children, especially those under five years old, are particularly at risk as they are most likely to put contaminated fingers or items in their mouths (including thumb sucking, nail biting and dummies/toys). Only small numbers of the bacterium are required to cause illness, so just because something (an animal or an object) is not visibly contaminated with faeces, this does not necessarily mean it is free from risk.

People may become infected when they come into contact with animal faeces or saliva by:

- touching or kissing animals in animal petting/handling areas or during bottle feeding;
- feeding, stroking or touching animals through gates or pens;
- touching gates, or animal pen divisions, or other structures contaminated with faeces;
- picking up contaminated feed from the floor;
- removing contaminated footwear or clothing;
- eating, drinking and smoking with contaminated hands;
- using contaminated play equipment; or
- touching personal items taken on to the premises that have become contaminated, eg dropped toys or dummies and pushchair wheels.

Control measures

Control measures are actions that need to be taken to prevent or reduce exposure to a substance hazardous to health, in this case micro-organisms. Such measures include:

- the layout of the premises;
- the cleaning of the premises;
- provision and use of washing facilities;
- supervision;
- information; and
- signage etc.

In practice, a combination of control measures will be necessary to protect the health of visitors. To be effective, these measures should be practical, workable and sustainable. They should be reviewed on a regular basis.

Controlling the risk

In order to minimise and control the risk you should concentrate on the following:

- establishing premises' layout and routes, including areas to which visitors should not have access;
- defining, segregating and clearly identifying animal contact areas;
- defining, segregating and clearly identifying non-animal contact areas;
- defining, segregating and clearly identifying eating and play areas;
- providing adequate and suitable washing facilities;
- providing visitor information;
- providing information and signs for visitors;
- providing training and supervision of staff;
- establishing livestock management procedures, including management of bedding, sick/pregnant/stressed animals and veterinary input; and
- controlling manure/run-off and compost heaps.

These are discussed in more detail in the following sections.

Premises layout and routes

You should:

- decide which areas you want visitors to have access to;
- make sure that routes around the premises prevent visitors from entering non-access areas, eg parts of the premises where work is going on, or where manure is stored etc;

- consider how you will prevent entry to non-access areas, eg providing suitable fencing and warning signs;
- direct visitors to washing facilities as they leave any animal contact area, before they access eating and play areas and before they leave the premises;
- avoid directing visitors across tracks or routes used regularly by stock and farm vehicles. If this is not possible, then make sure visitors do not have to walk through any build-up of faeces, liquid effluent, or soiled bedding material. For example, regularly clear or clean routes used by livestock or when cleaning out pens etc, and provide duckboards or similar so that visitors avoid contaminating their footwear; and
- keep the premises as clean as practicable and ensure areas to which visitors have access are free from any build-up of faeces.

Animal contact

You should:

- decide on suitable contact areas, where visitors will be able to pet/handle and feed animals;
- decide which animals are suitable for contact areas;
- not allow the public to enter animal pens (as faeces or contaminated bedding will be underfoot and visitors may themselves carry infections on their footwear that could put your animals at risk);
- ensure adequate and suitable washing facilities are available and are used by visitors when leaving contact areas;
- ensure fencing and other barriers are regularly inspected and properly maintained;
- ensure that animal contact areas where visitors stand or walk are as free as possible from any faeces, and put in place measures to prevent contamination from liquid manure or surface run-off, where necessary;
- regularly clean and disinfect pen divisions and gates as required in animal contact areas where visitors are able to touch them;
- not allow faeces to remain on and contaminate walkways or other areas used by the visitors;
- not allow contaminated bedding or run-off material to contaminate walkways or other areas used by visitors;
- ensure that eating (including sweets, gum and ice cream), drinking, putting contaminated items in mouths (including dummies) and smoking are prohibited in animal contact areas (signs should be displayed instructing visitors of this requirement);
- ensure an adequate number of trained staff for contact areas; and
- ensure, where eating and play areas are adjacent to areas containing animals, measures are provided to prevent members of the public

touching the animals, eg by providing double fencing. This should be positioned at a distance that will prevent visitors reaching through to touch the animals and to prevent animals reaching over or through the fence to contact people.

In some non-contact areas, it will not be reasonably practicable to provide double fencing along enclosures where animals are kept. Examples would be: livestock farms that open occasionally, eg Open Farm Sunday; and along a farm walk/trail through fields. In such cases, the areas should be clearly signed to inform visitors they are entering a non-contact area and touching, animal petting/handling and feeding of animals is not allowed. Eating and play areas should be located within non-contact areas. Any decision to rely on single fencing and signage rather than double fencing must be justified in your risk assessment.

Eating areas

You should:

- site eating or picnic facilities away from areas where animals can be contacted, and preferably at the end of any farm trail, walk or tour, or outside the main areas of the premises;
- make sure that visitors have to pass through or by washing facilities before going to eating areas;
- ensure visitors are advised, eg by adequate signage, to wash their hands before eating;
- exclude your animals including captive birds from eating areas. They could contaminate eating areas with faeces. Consider wing clipping, double gates into eating areas and adequate fencing to exclude them;
- ensure where eating areas are adjacent to animal contact areas, animal contact must be prevented, eg by providing double fencing. This should be positioned at a distance that will prevent visitors reaching through to touch the animals and to prevent animals reaching over or through the fence to contact people;
- provide adequate waste bins and clear discarded food from eating areas to discourage wild birds and rodents from feeding and contaminating the area; and
- position ice-cream and/or sweet kiosks etc in the non-contact areas of the premises, such as the eating areas or at the exit, where visitors have passed washing facilities, and remind visitors using the kiosks, by notices or verbally, to wash their hands before touching or eating purchased food or sweets.

Play areas

You should:

- where possible, site play areas away from areas where animals can be contacted, and preferably at the end of any farm trail, walk or tour, or outside the main areas of the premises;
- ensure visitors are advised, eg by adequate signage, to wash their hands before and after using play areas;
- exclude your animals, including captive birds, from play areas. They could contaminate play areas and equipment with faeces. Consider wing clipping, double gates into play areas and adequate fencing to exclude them;
- ensure where play areas are adjacent to animal contact areas, animal contact is prevented, eg by providing double fencing. This should be positioned at a distance that will prevent visitors reaching through to touch the animals and to prevent animals reaching over or through the fence to contact people; and
- ensure play areas are cleaned on a regular basis to remove any contamination.

Washing facilities

While the primary control measures should focus on reducing and eliminating faecal contamination, the most effective method of removing dirt and contamination remains hand washing with soap and hot and cold or warm running water.

Washing facilities, ie soap and running water, should be provided at or near the exits from any area/premises where visitors are encouraged to have animal contact. **Cleansing wipes or anti-bacterial gels are not an acceptable substitute for proper hand washing.**

At temporary events, such as agricultural shows where there are suitable permanent washing facilities provided, eg a purpose-built toilet and washing block, it is acceptable practice for animal exhibitors or others to provide information and signs to indicate that visitors should use these facilities after contact with the animals. If such general visitor washing facilities do not exist or are not situated close by, then it will be necessary to provide suitable temporary washing facilities. Ideally, washing facilities should be positioned close to areas where animal contact is permitted.

Further guidance on the provision of washing facilities at agricultural shows is being discussed with the industry.

The provision of adequate numbers of facilities and their location is crucial to preventing ill health. Facilities

can be individual taps and basins, and/or long sinks with a number of running water outlets. They need to be provided and easily accessible at or near:

- areas for intentional contact (animal petting/handling barns etc). If there is a one-way system for visitors through the contact area they should be provided immediately adjacent to the exit; if there is a two-way flow of visitors they should be provided immediately adjacent to entrances and exits. A one-way system may help to ensure that washing facilities are properly used;
- entrances to eating areas; and
- the exit from the premises.

Washing facilities

An acceptable way of estimating the capacity of the washing facilities is to:

- estimate the maximum number of visitors expected or permitted at one time;
- consider how many visitors will be in animal contact areas at any time – you may already limit numbers of visitors in these areas to allow them time to enjoy the experience with the animals;
- assess the rate at which visitors will leave contact areas, eg in large groups such as school parties or a few at a time; and

water, and it may encourage visitors, especially children, to wash more thoroughly, particularly in cold weather. Warm water supplies should be fitted with a means of restricting the temperature to no more than 43 °C to avoid scalding;

- have liquid soap. Bactericidal soaps are not necessary;
- have paper towels. Hot-air hand-dryers are suitable but may lead to queues, which discourage visitors from washing their hands. Reusable hand towels are not suitable;
- be properly maintained and cleaned regularly as required, at least daily;
- be replenished with paper towels and soap as necessary;
- include open or pedal-operated waste bins which are emptied as necessary; and
- be arranged so that visitor throughput and/or water overflows etc do not make the immediate vicinity muddy and so put people off using the washing facilities.

In exceptional circumstances, such as premises that open on an occasional basis in the summer, providing cold running water only, soap and disposable towels may be acceptable. This must be justified in your risk assessment.

Do not provide buckets or troughs of standing water which are shared or reused by several people – they do not allow effective hand washing, and reusing water can spread micro-organisms among those using it. Adding a disinfectant to the water does not make the practice acceptable.

It is important to encourage your staff, parents, teachers and others who have responsibility for visitors to make sure that children and other visitors wash their hands properly.

Cleaning footwear, pushchairs, wheelchairs etc

You should ensure your planned layout will minimise the likelihood of contamination of footwear, pushchairs, wheelchairs etc. Where this unavoidably occurs, you will need to consider providing suitable facilities to allow visitors to clean contaminated footwear and wheels on pushchairs and wheelchairs. The facilities should be arranged to reduce the risk of personal contamination from manure, liquid run-off etc during the cleaning process and be located so that people can easily wash their hands after this has been done.

Visitor information and signage

Information should be provided to visitors covering:

- risks to health;
- precautions taken to minimise risks;

- personal responsibilities of visitors to minimise risks, including hygiene precautions; and
- site plan, map, route directions or other information as necessary.

The information should be included:

- on the attraction's website; and
- on site maps/plans or other handouts given to visitors on arrival.

Leaflets or pre-visit packs for schools and other organised groups should be provided to help teachers and others plan the visit.

Remember the following:

- Information should include notices at all entrances to the premises to remind visitors of the need for good personal hygiene, and to inform them that they should only eat or drink in the designated areas.
- Consider handouts and stickers for visitors etc about hand washing.
- Signs should be erected in appropriate places reminding visitors to wash their hands when leaving animal contact areas, before eating, and when leaving the premises.
- Washing facilities should have signs showing how to wash hands properly.
- Young children may have dummies or toys that they put in their mouths. You should remind accompanying adults not to put dummies that have fallen to the ground back into their children's mouths.
- Pictograms, audio devices, continuous loop videos or other media may be useful.
- Information should be clearly legible and may be required in languages other than English.

Training and supervision

You should:

- ensure staff are trained and instructed about the human health risks associated with animals and the necessary control measures. Don't forget that training should also be provided for temporary or seasonal staff taken on during busy periods;
- ensure staff are trained and instructed on what visitors should or should not do;
- provide guidance to staff on how to explain the hygiene message to visitors, including the importance of thorough hand washing, particularly for children;
- arrange adequate and appropriate levels of supervision in contact areas. The number of supervisors will depend on the size of the animal contact area and the number of visitors permitted

or expected in that area at one time;

- make sure that children are supervised while they wash their hands. Although this is the responsibility of parents or teachers, in some cases staff may need to help in supervising;
- remind supervisors in animal contact areas (who may also be there to protect the animals) to ensure that visitors do not eat, drink or put items in their mouths while in these areas;
- ensure supervisors discourage visitors (especially children) from putting their fingers in their mouths or kissing the animals; and
- stress to your own staff the importance of following good personal hygiene, eg thoroughly washing their own hands, when necessary, and not eating or drinking in animal contact areas.

Livestock management procedures

You should:

- consider producing an animal or farm health plan in consultation with your vet to help reduce the risks from zoonoses;
- assess whether animals are healthy before moving them to animal contact areas, but remember that animals carrying *E coli* O157 do not show signs of illness;
- ensure that animals that have just given birth, or been born, are not put in contact areas;
- immediately remove any animals showing signs of ill health, such as diarrhoea or stress, from animal contact areas until they have recovered and seek veterinary attention and advice promptly;
- keep animals and their housing clean;
- consider whether replacement stock can come from within the premises rather than being brought in (this would reduce the likelihood of new infections being inadvertently brought on to the farm);
- where possible, source replacement livestock (especially young animals for bottle feeding) from a reputable supplier with known health status, where the stock-keeper will have ensured that they have received an adequate supply of colostrum after being born;
- try to minimise movement and mixing of animals from different groups (this is particularly important to minimise the shedding of *E coli* O157 by ruminants such as cattle and sheep);
- check all animals on display regularly for evidence of illness, consulting your vet as appropriate; and
- regularly empty and clean water troughs and provide the animals with clean drinking water.

Manure and compost heaps

You should:

- position manure or compost heaps well away from areas that visitors can access, or fence them off;
- prevent or contain any liquid run-off where this might contaminate visitor areas; and
- not allow visitors to bag their own compost or manure.

Additional advice

Further advice on *E coli* O157, including a video on handwashing, is available at: www.hse.gov.uk/campaigns/farmsafe/ecoli.htm

Sources of advice for dutyholders

The National Farm Attraction Network (www.farmattractions.net), the Federation of City Farms and Community Gardens (www.farmgarden.org.uk), Farming and Countryside Education (www.face-online.org.uk), and Farms for Schools (www.farmsforschools.org.uk) all provide advice and other services. Consider using the assurance or inspection schemes run by some of these organisations.

Where the premises are part of a commercial farm this will normally be HSE: www.hse.gov.uk; in other cases it will be the local authority for your area: www.direct.gov.uk/en/DI1/Directories/Localcouncils/index.htm

Other advice is available from a number of other government websites including:

www.hpa.org.uk/
www.hps.scot.nhs.uk/
www.dh.gov.uk/en/index.htm
ww2.defra.gov.uk/

Advice on the control of infections in animals that can be transmitted to people can also be provided by veterinary surgeons (see telephone books for contacts).

Further information

For information about health and safety, or to report inconsistencies or inaccuracies in this guidance, visit www.hse.gov.uk/. You can view HSE guidance online and order priced publications from the website. HSE priced publications are also available from bookshops.

This leaflet contains notes on good practice which are not compulsory but which you may find helpful in considering what you need to do.

This document is available at: www.hse.gov.uk/pubns/ais23.pdf

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Advice to teachers and others who organise visits for children

HSE information sheet

This supplement to AIS23 *Preventing or controlling ill health from animal contact at visitor attractions* advises teachers and others who organise visits by children on the precautions necessary to reduce the risk of ill health arising from contact with animals.

All animals naturally carry a range of micro-organisms, some of which can be transmitted to humans, where they may cause ill health. Some of these, such as the bacterium *Escherichia coli* O157 (*E coli* O157) or *Cryptosporidium parvum* (a microscopic parasite), present a serious health hazard and have the potential to cause severe illness and health problems which may be particularly acute in young children.

As with many other educational or recreational activities, visits can never be considered free from all risk. However, while the hazards are real, the risk of infection in children can be readily controlled by simple everyday measures. The following practical steps will help make your visit even more safe, healthy and enjoyable.

Before your visit, you should:

- read and understand the advice in the main AIS23 information sheet, and discuss arrangements for the visit with the management at the site;
- confirm that the control measures provided at the site match the recommendations in AIS23;
- seek advice from your local authority or organisation on what the appropriate ratio of children to teachers/leaders/assistants/parents etc should be;
- discuss and agree with the supervisors, parents or staff of the school, creche, leaders of youth organisations etc, their roles and responsibilities during the visit. In particular, they must understand the need to make sure that the children wash, or are helped to wash, their hands thoroughly after contacting animals. Key points to cover with the children should include:
 - explaining the rules for the visit, stressing that they must not eat, drink or chew anything (including sweets) outside the areas in which you permit them to do so;

AIS No 23 Supplement (rev2)

- explaining why they must wash their hands thoroughly after contact with the animals, and before eating or drinking anything;
- demonstrating how to wash their hands properly;
- discussing the requirements for appropriate clothing, including suitable footwear. You should liaise with the attraction to ascertain what this is; and
- checking that cuts, grazes etc on children's hands are covered with a waterproof dressing.

During and after the visit, make sure that the children:

- are reminded of the rules/precautions to take on arrival at the site;
- do not kiss animals;
- always wash their hands thoroughly before and after eating, after any contact with animals, and again before leaving the site;
- eat only food that they have brought with them, or food for human consumption they have bought on the premises, in designated areas, and never eat food which has fallen to the ground, or taste animal foods;
- do not suck fingers or put hands, pens, pencils or crayons etc in mouths;
- where practical and possible, clean or change their footwear before leaving; and
- wash their hands after changing their footwear.

Check that the children stay in their allocated groups during the visit and that they:

- do not use or pick up tools (eg spades and forks) or touch other work equipment unless permitted to do so by site staff;
- do not climb on to walls, fences, gates or animal pens etc;
- listen carefully and follow the instructions and information given by the site staff;
- approach and handle animals quietly and gently;
- do not chase, frighten or torment the animals; and
- do not wander off into unsupervised or prohibited areas, eg manure heaps.

Remember:

- **the children are your responsibility during the visit;**
- you should supervise them during the visit, especially during hand washing to make sure that each child washes thoroughly. Site staff may be able to help with this supervision; and
- allow plenty of time before eating or leaving so that the children do not have to rush.

If a member of your group shows signs of illness (eg sickness or diarrhoea) after a visit, advise them or their parent/guardian to visit the doctor and explain that they have had recent contact with animals.

Additional advice

Further advice on *E coli* O157, including a video on hand washing, is available at: www.hse.gov.uk/campaigns/farmsafe/ecoli.htm

Other advice is available from a number of other government websites including:

www.hpa.org.uk/
www.hps.scot.nhs.uk/
www.dh.gov.uk/en/index.ht