

DEPARTMENT OF HUMAN SERVICES

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Petting Zoo Infection Control Guideline

F O R

**PETTING ZOO OPERATORS
EDUCATION AND CHILDCARE SERVICES
AND ENVIRONMENTAL HEALTH OFFICERS**



COMMUNICABLE DISEASE CONTROL BRANCH AND ENVIRONMENTAL HEALTH BRANCH



**Government
of South Australia**

PETTING ZOO INFECTION CONTROL GUIDELINE

For petting zoo operators, environmental health officers
and education and childcare services

2 0 0 2

COMMUNICABLE DISEASE CONTROL BRANCH AND ENVIRONMENTAL HEALTH BRANCH
DEPARTMENT OF HUMAN SERVICES
GOVERNMENT OF SOUTH AUSTRALIA

February 2002

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Communicable Disease Control Branch
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DEPARTMENT OF HUMAN SERVICES



**Government
of South Australia**

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The National Library of Australia Cataloguing-in-Publication

Petting zoo infection control guideline : for petting zoo operators, education and childcare services and environmental health officers.

ISBN 0 7308 9157 7.

1. Petting zoos - Health aspects. I. South Australian Health Commission. Environmental Health Branch. II. South Australian Health Commission. Communicable Disease Control Branch. III. South Australia. Dept. of Human Services.

636.0889

Information contained in this guideline may be subject to change. This guideline is also available on the Public Health SA website at <http://www.dhs.sa.gov.au/pehs/branches/environmental-surveillance.htm> where it may be revised from time to time.

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Acknowledgements

This guideline was developed with advice from representatives of the following organisations:

- Adelaide Zoo
- Agricultural Learning Centre, Department of Education, Training and Employment, South Australia
- Aldgate Primary School, South Australia
- Association of Independent Schools of South Australia
- Asthma Foundation, South Australia
- Australian Institute of Environmental Health (South Australia branch)
- Catholic Education Office, South Australia
- Centers for Disease Control and Prevention, Atlanta, USA
- Church of Christ, South Australia
- City of Victor Harbor, South Australia
- Crown Solicitor's Office, Environmental Health Branch, Communicable Disease Control Branch, Department of Human Services, South Australia
- Department of Education, Training and Employment, South Australia
- Environmental Health Service, Health Department of Western Australia
- Hahndorf Farm Barn, South Australia
- National Parks and Wildlife, Department for Environment and Heritage, South Australia
- Old Macdonald's Farm: Tanunda, South Australia, and Waterford, Queensland
- Primary Industries and Resources South Australia
- City of Port Adelaide Enfield Council, South Australia
- Port Pirie Regional Council, South Australia
- Prospect Veterinary Hospital, South Australia
- Queensland Health
- Events Service, Royal Agricultural and Horticultural Society of South Australia Inc
- Salisbury Council, South Australia
- The District Council of Ceduna, South Australia
- Wildlife Exhibitors Association of South Australia
- Workcover, South Australia

Summary



The aim of the petting zoo guideline is to reduce the risk of zoonotic infections and ill health to visitors of petting zoos and similar enterprises in South Australia.

This guideline recommends anticipating possible risks and consistently following infection control measures to minimise zoonotic infections to visitors.

Zoonoses are infections that can be passed from animals to humans. Animals may carry a range of microorganisms that are harmful to humans without showing any signs of disease.

Diseases can be spread through direct contact with animals, their bites and scratches, and their carcasses, or through indirect contact with their faeces, urine, saliva, blood, aerosols, birth products, or enclosures contaminated with these materials.

Petting zoo operators should assume all animals carry microorganisms harmful to health and therefore take precautions to reduce the risk of ill health to visitors of the petting zoo.

Those people who are at increased risk of contracting zoonoses and may suffer more severe symptoms are:

- Pregnant women
- Immuno-compromised persons
- Children under the age of five
- Infants under age one
- The elderly

Education and childcare services have a duty of care and occupational health and safety responsibility to protect children and staff from foreseeable risk of harm or injury.

Precautions petting zoo operators should take.

- Maintain adequate handwashing facilities that provide:
 - running water
 - soap (bar or liquid)
 - disposable paper towels, clean towels or air dryers
 - waste containers
 - visitor access to handwashing especially considering the maximum number of visitors at any time
- Keep animal contact and public eating areas separate
- Provide pasteurised or boiled milk or milk products, not raw, for tasting
- Keep birthing animals out of public areas
- Provide adequate barriers which prevent visitors from touching animals that are not available for touching or that should not be touched

- Provide advice on proper handwashing and signage that directs visitors to handwashing facilities
- Provide moist towelettes for emergency situations only and advise follow up with proper handwashing
- Advise children's groups about the petting zoo's animals, activities, commonsense precautions and facilities prior to the visit, if requested
- Never offer bats or flying foxes for touching
- Provide only healthy animals for display or visitor contact

Proper handwashing means:

- using soap and running water, warm to hot water is best
- wetting hands thoroughly and lathering with soap
- rubbing hands vigorously for at least 10-15 seconds as you wash them
- paying attention to back of hands, wrists, between fingers and under fingernails
- rinsing hands well under running water
- drying hands with a disposable paper towel, clean towel, or air dryer
- turning off the tap with the used paper towel, if applicable

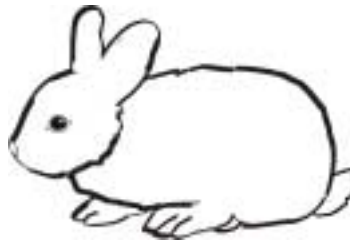
Local council or Department of Human Services environmental health officers are responsible under legislation to:

- promote proper standards of public and environmental health
- prevent the occurrence of an offensive condition or insanitary condition
- minimise the spread of disease

Environmental health officers can be contacted at your local council for information and advice on sanitation and disease control.

Aim of guideline

The aim of this guideline is to reduce the risk of zoonotic infections and ill health to visitors of petting zoos and similar enterprises in South Australia.



Introduction

Petting zoos are a popular activity. They offer visitors the opportunity of seeing and contacting animals. Activities such as touching the animals and helping to bottle feed young animals may be encouraged at some petting zoos. Visiting petting zoos present a small but real risk for visitors acquiring zoonotic infection. The risk of acquiring infection is potentially higher in urban children who may have no acquired natural immunity.

Zoonoses are infections that can be passed from animals to humans. Sources of zoonoses reported in Australia include cattle, sheep, horses, pigs, dogs, cats, chickens, turkeys, birds, kangaroos, wild animals, rodents, reptiles (including turtles and tortoises) and bats. See appendix 1.

In recent years a number of cases of zoonoses associated with petting zoos, pets and reptiles have been reported in North America, the United Kingdom and Australia. Refer to the *Information Resources* section for internet addresses to specific cases of zoonotic infections after visits to petting zoos.

This guideline addresses reducing the risk of contracting zoonotic disease and infection by visitors. Physical risks of contact with animals will not be discussed in this guideline.

While not discouraging visits to petting zoos, this guideline recommends anticipating possible risks and consistently following infection control measures.

Guidance for operators, environmental health officers and education and childcare services is provided in separate sections.

Definitions

the authority including 'relevant authority' means –

- a. In relation to a local government area-the local council for that area; and
- b. In relation to a part of the State that is not within a local government area-the Minister,
(but where powers are withdrawn from a local council and vested in the Minister or the Minister is, by agreement with a local council, discharging duties of the council, a reference to the authority in relation to those powers or duties is a reference to the Minister rather than that council)

business includes a not-for-profit business, school or a charity event

the Commission means the South Australian Health Commission

the Council means the Public and Environmental Health Council

local council means a council constituted under the *Local Government Act 1934*

notifiable disease means a communicable disease prescribed by regulation to be a notifiable disease

petting zoo is the term used to encompass events (including animal rides), open farms or premises where animals are made available for contact with members of the public whether a fee is charged or not

zoonoses are infections that can be passed from animals to humans

Is the business/activity/event a 'petting zoo'?

For the purpose of this document, 'petting zoo' is the term used to encompass events (including animal rides) open farms or premises where animals are made available for contact with members of the public whether a fee is charged or not. They include (but are not limited to):



- Animal nurseries
- Zoos
- Friendship farms
- Wildlife parks
- Wildlife sanctuaries
- Nature education centres
- Travelling farms or animal troupes, including circuses
- Agricultural shows and field days
- Mini-farms and animal nurseries at schools
- Animal exhibits held at shopping centres

If a 'business' is one of the above or a similar type, it is considered to be a petting zoo.

The ways zoonotic diseases are spread

Diseases can be spread through direct contact with animals, their bites and scratches, and their carcasses, or through indirect contact with their faeces, urine, saliva, blood, aerosols, birth products, or enclosures contaminated with these materials. Animals may carry a range of microorganisms harmful to humans without showing any signs of disease (sickness).

There are several ways that zoonotic diseases can be spread:

- *Faecal-oral route* - Animal faeces may pass directly from soiled hands to mouth or indirectly by way of objects, surfaces, water or food contaminated with faeces. In petting zoos this spread may occur after touching animals or their enclosures, neglecting to properly wash hands with soap and running water and so faeces are passed directly from soiled hands to mouth or indirectly by way of objects, food or water soiled with faeces. An example of a disease spread this way is *Salmonella* infection.
- *Inhalation* - Humans may breathe in droplets containing harmful organisms (aerosols) originating from an infected animal. Dust or dried matter may also contain harmful organisms and be inhaled.

Visitors should not be exposed to aerosols from birthing animals or animals that have just been born. An example of a disease spread this way is Q fever infection caused by the bacterium *Coxiella burnetii*.

- *Ingestion* – Consuming contaminated food or water may lead to illness. For example, consumption of unpasteurised milk from an infected animal or eating animal feed. An example of a disease spread this way is salmonellosis caused by the bacterium *Salmonella*.
- *Skin or mucous membrane contact* - Infections may be spread directly through animal bites and scratches or indirectly when broken skin or mucous membranes come in contact with

contaminated animals or surfaces. An example of a disease spread this way is ringworm caused by fungi.

- *Urine* - Some infections may be spread when urine is transferred from soiled hands or objects to the mouth, mucous membranes or cuts and scratches. An example of a disease spread this way is leptospirosis caused by the bacterium *Leptospira*.



Groups at increased risk

Those people who are at increased risk of contracting zoonoses and may suffer more severe symptoms are:

- Pregnant women.
- Immuno-compromised persons (those with impaired immunity) including persons with diabetes, chronic kidney or advanced liver disease, HIV, and individuals who are taking immuno-suppressive drugs that suppress their immune system or people with significant co-morbidities.
- Children under the age of five should be closely supervised when in contact with animals and their enclosures, to prevent animals licking children's faces and hands and children putting contaminated fingers in their mouths.
- Infants under age one are at particular risk from direct and indirect contact with animals. It is recommended that infants under the age of one do not touch animals or their enclosures.
- The elderly may not be at greater risk of contracting disease because they are more likely to have acquired immunity, however they may suffer more severe symptoms from diseases to which they do not have immunity.

People with known allergies

It is recommended that people with known allergies to some animals be aware of the potential risk for an allergic reaction and in the case of asthmatics, have their relievers with them.

How to reduce risk of disease spread: handwashing

Infectious diseases may be spread from either animals or the environment to people via contaminated hands. Handwashing is one of the most important practices in preventing the spread of disease for visitors to petting zoos.

Following good hygiene practices, such as the correct handwashing technique and washing hands at appropriate times in the petting zoo environment, will decrease the risk of disease spread.

While visiting animals do not:

- touch mouth with hands, or lick fingers
- eat food intended for animals
- eat
- leave open wounds uncovered
- wipe hands on clothing, if avoidable

Always wash hands with soap and running water after:

- touching animals, their enclosures or food containers. Any part of the animal or its surrounds can be contaminated with faeces or urine
- being licked, bitten or spat on by animals
- having contact with soil or faeces

Always wash hands with soap and running water before eating, drinking or smoking.

How to wash hands

- Use soap and running water, warm to hot water is best.
- Wet hands thoroughly and lather with soap.
- Rub hands vigorously for at least 10-15 seconds as you wash them.
- Pay attention to back of hands, wrists, between fingers and under fingernails.
- Rinse hands well under running water.
- Dry hands with a disposable paper towel, a clean towel, or air dryer. Electric hand dryers may be used. If cloth towels are used select a fresh towel each time or if a roller towel is used, select a fresh portion of towel.
- Turn off the tap with the used paper towel, if applicable

Wash dummies or toys that have fallen on the ground or in contact with animals with soap and running water and before returning to children.

Teachers and carers should supervise children to ensure proper handwashing.



How to reduce the risk of disease spread: extra

Unpasteurised milk

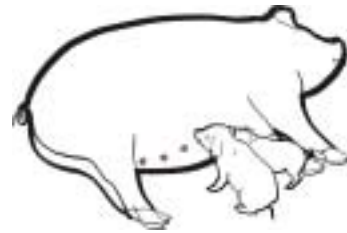
Unpasteurised (raw, untreated) milk is considered by the Department of Human Services as unsafe for human consumption because such milk may contain pathogenic microorganisms. Boil milk to destroy these organisms before offering for human consumption. Unpasteurised or unboiled milk or milk products should not be offered for 'tasting'.

Animal food

Animal foods are not manufactured for human consumption. They may not meet the high safety standards of human food, and should not be eaten by members of the public because of contamination risks. Operators should remind visitors not to sample food provided for feeding the animals.

Animal birthing

Operators should ensure visitors are not exposed to aerosols from birthing animals or animals that have just been born. If animal births occur, operators should ensure the visitors have absolutely no contact with the animals or the birthing environment.



Bats

Bats and flying foxes may carry lyssavirus. The public should never be given the opportunity to touch bats or flying foxes in any zoo, farm or other wildlife situation.

Requirements for handwashing

If adequate sanitation or personal hygiene facilities are not provided, the authority may issue a notice to the owner to provide them, in accordance with Section 20 of the Public and Environmental Health Act, 1987.

Adequate sanitation or personal hygiene facilities include the provision of handwashing facilities with:

- running water
- soap (bar or liquid)
- disposable paper towels, clean towels, or air dryers
- waste containers
- sufficient numbers to be freely available to visitors

Accessibility

- Handwashing facilities need to be accessible to visitors leaving animal enclosures and to those eating on the premises.
- Ensure small children and persons with disabilities can reach and use the handwashing facilities.
- Signs directing visitors to handwashing facilities should be obvious and prominently placed at locations before they enter and leave animal enclosures and before they enter designated eating areas. Posters giving full instructions on proper handwashing are available from the Communicable Disease Control Branch, Department of Human Services, ph (08) 822-7177 or e-mail: cdc@dhhs.sa.gov.au (See appendix 2).

Specific information for operators of petting zoos

What are the responsibilities of petting zoo operators?

Negligence and Duty of Care – the operator is liable to persons reasonably likely to be harmed by the operator's actions or lack of actions if they are careless and there is a perceivable, avoidable risk. Therefore, operators should take precautions to reduce the risk of ill health to visitors of the petting zoo.

What practical steps can operators take?

Operators should assume all animals carry microorganisms harmful to humans and take appropriate precautions to prevent the spread of disease, including:

- practise and promote good, thorough handwashing with soap and running water after contact with animals or their enclosures

- position handwashing facilities so that visitors are encouraged to wash their hands with soap and running water on exiting animal enclosures and before entering designated eating areas
- separate animal contact areas from visitor eating areas
- keep animals out of visitor eating areas
- provide adequate bins for visitors to dispose of tissues, handwipes and food
- maintain a first aid kit in case of accidental scratching or biting to visitors
- keep birthing animals out of public areas. Aerosols produced during the process may be hazardous to onlookers
- if providing milk or milk products for tasting, only do so after they have been pasteurised or boiled
- provide adequate barriers which prevent visitors from touching animals that are not available for touching or that should not be touched
- ban known aggressive animals coming into direct contact with visitors
- maintain animals in an environment appropriate to maintain their health and well-being
- reduce stress and overcrowding of animals to reduce possibility of disease
- provide only healthy animals for public display or contact:



- establish a close association with a vet to ensure animals are clinically healthy
- maintain a comprehensive parasite control program for all species present with the vet
- vaccinate animals when appropriate eg against leptospirosis

- regularly remove and appropriately dispose of faeces and other wastes, including birth products

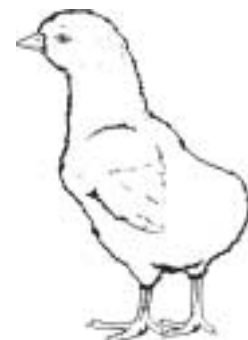
Place obvious and prominent handwashing and directional signs in appropriate locations, such as the entrance or exits of the petting zoo, to remind visitors to:

- use good hygiene practices in the petting zoo environment
- only eat or drink in designated areas, not in animal contact areas. If a petting zoo does not have separate visitor eating and animal contact areas, signs should advise visitors that hands should be thoroughly washed with soap and running water after touching animals and before eating.
- wash hands with soap and running water when leaving animal enclosures and before eating

See appendix 2 for suggested locations and elements of signage.

Operators should consider sending pre-visit information to school groups and encourage teacher pre-excursion visits before they attend the petting zoo. This provides the teacher or carer with opportunities to enhance the educational experience of the petting zoo for children.

The pre-visit information could include the types of animals, and their behavioural characteristics, activities offered, facilities available and the commonsense precautions to prevent spread of disease.



Petting zoo: permanent or temporary?

Petting zoos may fall into two groups; those that are permanent and those that are temporary or mobile premises.

Permanent premises

Permanent premises need to provide adequate handwashing facilities as described in the section, *Requirements for handwashing* page 8.

Temporary or mobile premises

Operators of temporary or mobile premises need to consider a range of issues including:

- provide handwashing facilities that children or people with disabilities can operate
- locate the activities close as practical to permanent handwashing facilities, if present, and away from places where food is sold
- if in a shopping centre, operators are encouraged to discuss placement issues with the management of the centre and an environmental health officer from the local council
- erect obvious and prominent signage instructing visitors on where, when and how to wash their hands
- emergency situations may be temporarily addressed with moist towelling (baby wipes are suitable). Provide waste containers for used wipes. Directions for use of handwashing facilities are required for visitors whether wipes are used or not.
- hire portable handwashing facility (see appendix 3). If a portable basin is not accessible or feasible, containers of water with taps on them (such as those used for drinking water) can be mounted above basins for handwashing, however, the water used for washing must be running from the tap (using the water in a basin is not acceptable), and soap should be used. Provide single use paper towels to dry hands.
- waste (used) water collection and disposal. Contact the local council environmental health officer to discuss options for an appropriate waste disposal system. Wastewater temporarily stored in a suitable holding tank of sufficient capacity must be emptied as often as necessary to prevent overflow, nuisance or an insanitary condition. Storage times for wastewater should also be discussed with the venue owner and environmental health officers.

Specific information for education and childcare services

What are the responsibilities of education and childcare services?

Education and childcare services have a duty of care and occupational health and safety responsibility to protect children and staff from foreseeable risk of harm or injury. This encompasses responsibility to:

- be informed about and aware of risks
- develop and implement procedures to minimise associated harm
- supervise children to ensure they follow procedures to keep themselves and others safe

Therefore you should take precautions to reduce the risk of ill health to the children in your care who visit petting zoos.

Assume all animals carry microorganisms harmful to humans and take appropriate precautions to prevent disease spread. Proper handwashing is one of the most important practices in preventing the spread of disease. Allow enough time for children and carers visiting petting zoos to follow the advice in this guideline.

Before the visit

Seek information from the petting zoo you are visiting regarding:

- which animals are on display
- which animals may be touched by the children
- whether viewing animal birthing is likely and if so, would the onlookers be at risk from aerosols produced during that process
- if facilities are available for handwashing, including running water, soap (bar or pump), disposable paper towels, clean towels, or air dryers and waste containers. If handwashing facilities are not available (eg. a petting zoo is a temporary affair) take moist towellettes to use until proper handwashing can be done
- whether small children or students with disabilities can reach and use the handwashing facilities
- any other information relevant to your visit



Have an educational session with the children before the visit. Explain that tormenting, hitting and chasing animals and pulling tails is not appropriate behaviour towards animals. Respectful behaviour towards animals reduces the risk of disease spread, for example through accidental scratching or biting.

Particular care should be taken when food or animal young are present. Never get between the animal and its food or its young and do not handle its food or young. In general behave in a calm, quiet manner, talk quietly, do not make loud noises or sudden movements and treat all animals with respect and consideration.

Familiarise the children and adults with behaviours that are recommended at petting zoos, see *During the visit*, below. Discuss all aspects of the visit, especially handwashing. For instructions on how to wash hands see the section, *Requirements for handwashing*, page 8.

Discuss how children will be supervised, especially for proper handwashing, with accompanying carers to ensure duty of care requirements are met.

During the visit

Ensure any open wounds are covered.

Sensible steps for children and their carers to follow during the visit are described below.

- Always wash hands after leaving the animal enclosures, whether animals were touched or not.
- Wash hands with soap and running water before eating.
- Only eat or drink in designated areas, not in animal contact areas. If a petting zoo does not have separate visitor eating and animal contact areas, signs should advise visitors that hands should be thoroughly washed with soap and running water after touching animals and before eating.

While visiting animals do not:

- suck fingers or objects
- kiss the animals
- touch mouth with hands, or lick fingers
- eat food intended for animals
- eat
- wipe hands on clothing, if avoidable



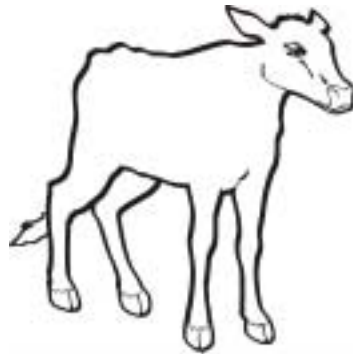
Always wash with soap and running water after:

- touching animals, their enclosures or food containers. Remember that any part of the animal can be contaminated with faeces or urine.
- being licked, bitten or spat on by animals
- having contact with soil and faeces

Always wash hands with soap and running water before eating, drinking or smoking.

Wash dummies or toys that have fallen on the ground or in contact with animals with soap and running water and before returning to children.

Advise parents and guardians to supervise children while handwashing to ensure proper handwashing.



After the visit

If a member of the group becomes ill (eg diarrhoea, nausea, vomiting) in the days after visiting a petting zoo, advise them to visit their doctor and explain that they have had recent contact with animals.

Specific information for environmental health officers

What are the roles and responsibilities of environmental health officers?

This petting zoo guideline has been prepared on behalf of the Public and Environmental Health Council (the Council).

The Council is established under the provisions of the Public and Environmental Health Act, which requires it to initiate, carry out or oversee programs and activities designed to improve public and environmental health. The Act empowers the Council to issue guidelines to assist local councils with administration of the Act.

Local councils and the Environmental Health Branch, Department of Human Services (relevant authority) have a duty under Section 12A of the Public and Environmental Health Act, 1987 (the Act) to promote proper standards of public and environmental health in their area.

Administering the Act is the responsibility of environmental health officers with the local council or the Department of Human Services. The Department of Human Services is responsible for areas of South Australia, which are not covered by local government, that is, local councils.

Environmental health officers are available to assist operators of petting zoos to ensure the provisions of the guideline are administered to prevent the occurrence of an offensive condition or insanitary condition and minimise the spread of disease.

Under the Act, the relevant authority has the power to serve notices on individuals responsible for an activity that is a breach of the Act.

Part 3, Protection of Public Health, Sections 15, 17 and 20, cover insanitary conditions, control of offensive activities and inadequate sanitation that give rise to a risk to health.

Part 4, Notifiable disease and prevention of infection, Section 36(9), provides when informed by the Department of Human Services a local council must take action when directed by the Commission as is reasonably open to the local council to assist in preventing the spread of that disease.

This guideline has no legislative force. However, the relevant authority could incorporate provisions of the guideline within a notice issued under the general provisions of the Public and Environmental Health Act, 1987, should it be necessary to prevent the spread of notifiable disease, and/or ensure sanitary conditions and/or control of offensive activities.

Information resources

Web based

The International Society for Infectious Diseases (ISID) was created to bring together all individuals interested in infectious diseases, and provides ProMED mail, which is a global electronic reporting system for outbreaks of emerging infectious diseases and toxins, open to all sources.

ProMED has a free subscription service: <http://www.promedmail.org/pls/promed/promed.home>

Suggested headings for searches relevant to this guideline on the ProMED site:

- Salmonellosis
- Petting zoo
- *E.coli*
- School children

Examples of websites with zoonotic disease information

Source/Date Accessed	Title/Date
http://www.health.qld.gov.au/phs/sphun/4751_doc.pdf Accessed 24 January, 2002	Avoiding Ill Health when petting Farm Animals Factsheet
http://www.hse.gov.uk/pubns/ais2.htm Accessed 24 January 2002	Common zoonoses in agriculture
http://www.guardian.co.uk/Archive/Article/0,4273,4121936,00.html Accessed 24 January, 2002	\$2.6m award for child disabled by farm bacteria, January 23, 2001
http://www.cdc.gov/search.htm Accessed 24 January, 2002	Use search term such as Farm visits Outbreaks of <i>Escherichia coli</i> O157:H7 Infections among children associated with farm visits – Pennsylvania and Washington, 2000 (April 20, 2001/50 (15); 293-7)
http://www.healthunit.com/template.asp?id=859 Accessed 24 January, 2002	An <i>E. coli</i> O157:H7 Outbreak Associated with an Animal Exhibit
http://www.health.sa.gov.au/PEHS/Youve-got-what/gen-topic-hand-washing.htm http://www.dhs.sa.gov.au/pehs/topics/topic-notifiable-diseases.htm Accessed 24 January, 2002	Handwashing Notifiable Diseases in South Australia
http://www.hse.gov.uk/pubns/ais23.pdf http://www.hse.gov.uk/pubns/ais23sup.pdf Accessed 24 January, 2002	Health and Safety Executive 1999, Avoiding ill health at open farms – Advice to farmers (with teachers' supplement) (Agriculture Information Sheet No. 23 revised), Health and Safety Executive, United Kingdom.
http://www.ncbugs.com/frame.html http://www.ncbugs.com/O157Guidlines.htm Accessed 24 January, 2002	North Cumbria District, UK Use search term such as Farm visits North Cumbria District Control of Infection Committee: Guidelines for the Control of Verocytotoxin-producing <i>Escherichia coli</i> (VTEC) (26 July, 2000)
http://www.knoxstudio.com/shns/story.cfm?pk=ECOLI-OHIO-10-24-01&cat=AH Accessed 24 January, 2002	Unwashed hands get blame for fair <i>E. Coli</i> (Written by Kim Bates, Toledo Blade, Scripps Howard News Service, October 24, 2001)
http://www.cdc.gov/ncidod/dbmd/outbreak/recom_m_farm_animal.htm Accessed 24 January, 2002	Farm Animal Contact: Reducing the Risk for transmission of Enteric Pathogens at Petting Zoos, Open Farms, Animal Exhibits, and other Venues where the Public has contact with Farm Animals Also see MMWR Weekly, October 26, 2001/ 50 (42); 928
http://www.parenting.sa.gov.au/pegs/24.pdf	Pets (Parenting SA, Parent Easy Guide No. 24, 1996)



Government References

The following list of Acts and Regulations can be obtained from Information SA, located at 77 Grenfell Street, Adelaide, South Australia (ph: 08-8204-1900) or can be accessed from SA Parliament at <http://www.parliament.sa.gov.au/>

From the home page, click Legislation, then South Australian Acts and Regulations, then plain English query. Enter any of the following titles:

- *Public and Environmental Health Act, 1987*

- *Food Act 1985*

- *Food Hygiene Regulations 1990*

- *Prevention of Cruelty to Animals*

- *Food Act Regulations 1986*

The *South Australian Code of Practice for the Welfare of Animals In Circuses* is available from the Environment Shop, 77 Grenfell Street, Adelaide, South Australia, for \$3.00.

Contacts



For information and advice on zoonotic disease:

Your doctor

OR

Your veterinarian

OR

Environmental Health Officer, at the local council

OR

Environmental Health Branch (Department of Human Services)

Tel: 08-8226-7100

E-mail: ehb@dhs.sa.gov.au

OR

Communicable Disease Control Branch (Department of Human Services)

Tel: 08-8226-7177

E-mail: cdcb@dhs.sa.gov.au

For information and advice on animal health:

Contact your veterinarian

OR

Dr Robin Vandegraaff

Chief Veterinary Officer

Primary Industries & Resources South Australia, Animal Health

33 Flemington St

GLENSIDE SA 5065

Tel: 08-8207-7970

Fax: 08-8207-7852

E-mail: vandegraaff.robin@saugov.sa.gov.au

Appendix 1 ~ Index of zoonoses

Zoonotic infections*

* Many of the gastrointestinal infections listed are most commonly contracted through eating contaminated food or through person to person spread. This table is limited to sources and routes applicable to this guideline.

	<i>Disease</i>	<i>Main animal reservoir</i>	<i>Route of transmission</i>	<i>Clinical effects</i>	<i>Prevention</i>
Gastrointestinal ~ Avoid hand-mouth contact when in animal environments.	<i>Campylobacter</i> infection	Cattle and sheep Poultry, other birds Wildlife Pigs Rodents Puppies and kittens	Faecal-oral route.	Diarrhoea (loose bowel movements) Mild fever Stomach cramps Nausea and vomiting in some cases	Proper handwashing and personal hygiene. Consuming only pasteurised or boiled milk.
	Cryptosporidiosis	Cattle and other domestic animals, especially calves and lambs	Faecal-oral route.	Watery diarrhoea Stomach cramps May include fever, vomiting and anorexia.	Proper handwashing and personal hygiene.
	Salmonellosis	Reptiles Cattle and sheep Horses Pigs Poultry	Faecal-oral route	Diarrhoea Fever Stomach cramps Nausea and vomiting	Proper handwashing and personal hygiene. Consuming only pasteurised or boiled milk.
	Shiga toxin producing <i>E. coli</i>	Cattle and sheep	Faecal-oral route.	Diarrhoea, possibly with blood. In severe cases, kidney failure and brain damage.	Proper handwashing and personal hygiene.
Dermal (skin)	Orf	Sheep, goats	Direct contact with mucous membranes of infected animals	Lesion on hands, arms or face	Good personal hygiene and washing the exposed area with soap and water
	Ringworm (Dermatophytosis)	Cattle Horses Cats Dogs	Direct skin-to-skin contact with lesions of animals or indirect contact with hair from infected animals	Flat, spreading, ring-shaped lesions	Avoid contact with animals. Proper handwashing and personal hygiene.

Z O O N O T I C I N F E C T I O N S *

* Many of the gastrointestinal infections listed are most commonly contracted through eating contaminated food or through person to person spread. This table is limited to sources and routes applicable to this guideline.

	Disease	Main animal reservoir	Route of transmission	Clinical effects	Prevention
Respiratory	Psittacosis	Birds	Inhaling dried droppings, secretions and dust from feathers of infected birds.	Fever Headache Rash Myalgia Chills Respiratory disease	Proper handwashing and personal hygiene. Avoid disturbing birds in their enclosures, as this produces dust. Clean cages. Consider ways to reduce stress on birds
	Q Fever	Cattle, Sheep and goats Kangaroos	Inhaling droplets from infected animal birth products. Inhaling dust from wool, hides or straw containing the organism. Consuming unpasteurised milk or milk products.	Abrupt onset of fever Chills Profuse sweating Severe headache Fatigue Nausea.	Human vaccination. Avoid inhaling contaminated droplets from animal birth products, urine, milk and faeces. Avoid inhaling dust from contaminated materials such as clothing, straw, wool or hides. Consuming only pasteurised or boiled milk.
Other	Hydatids	Dogs and foxes	Faecal-oral route	Slowly enlarging fluid-filled cysts, mainly on the liver or lungs, but can appear elsewhere. No symptoms unless they grow very big or burst.	Do not feed dogs raw offal. Worm dogs regularly Avoid touching dog faeces. Proper handwashing and personal hygiene.
	Leptospirosis	Cattle, including dairy herds Rats Pigs	Direct or indirect contact of mucous membrane or skin with urine from infected animal.	Sudden onset of fever Headache Chills Muscle aches Conjunctivitis Sometimes a rash.	Protective clothing. Proper handwashing and hygiene. Vaccination of animals.
	Lyssavirus (rabies-like-virus)	Bats Flying foxes	Animal bites and scratches	Loss of brain function Encephalitis Death	Human vaccination. Avoid contact with bats and their environment.
	Tetanus	Many	Animal bites and scratches	Lockjaw Painful muscular contractions.	Human vaccination
	Toxoplasmosis	Cats. Intermediate hosts include sheep, goats, rodents, pigs, cattle, chickens and birds	Faecal-oral route.	May be asymptomatic or acute with fever and swollen lymph glands. Blindness. Birth defects in foetus.	Proper handwashing and personal hygiene
	Toxocariasis	Dogs and cats, especially puppies	Faecal-oral route	Flu-like illness with rash and wheezing Blindness	Worm animals. Proper handwashing and personal hygiene.

Appendix 2 ~ Signage

Location of signs

Consider the movement of visitors and erect signage with public health advice in locations for maximum exposure, such as:

- Entrance of premises or at the ticket office
- Entrances and exits of animal contact areas
- Entrances to designated eating areas

Elements of signage

Public health signage should include the following elements:

- Wash hands thoroughly after touching animals or their enclosures
- Wash hands thoroughly before eating, drinking or smoking
- Eat or drink in designated areas only and use waste bins provided
- Handwashing facilities are located (locations or directions to be added by operator)

Public health signage could include the following elements:

- Enjoy your visit.
- This advice is in the interest of public health

Directional signs (optional)



Handwashing resources

Free *5 Steps to Clean Hands* posters and stickers are available from the Communicable Disease Control Branch, Department of Human Services, ph 08-8226-7177 or e-mail: cdbc@dhs.sa.gov.au. An example of the poster can be viewed at <http://www.dhs.sa.gov.au/pehs/Youve-got-what/gen-topic-hand-washing.htm>.

Appendix 3 ~ Portable wash stand example

The wash stand below is an example of a portable wash stand which is available for hire in SA. It incorporates a foot pump, optional soap dispenser, paper towel dispenser, wastewater stored within unit for disposal later. It is manufactured by PolyJohn Enterprises, USA. Web address: <http://www.polyjohn.com>.



Signature Applause™ Two sink portable wash stand

Top bowl features rotomolded polyethylene in light-white, black-speckled granite. The service tower, main tank and waste bins come in medium grey, black-speckled granite. Flexible inner greywater tank is removable for cleaning and maintenance.

Height	47.5 in	121 cm
Width	21.7 in	55 cm
Length	50.5 in	128 cm
Weight	70 lbs	31.8 kg
Capacity	60 gal	227 L
Trash (2 bags)	60 gal	227 L
Paper towels	470 towels (2 Ft. Howard 235-04 packs)	
Soap dispenser	2 - liquid soap dispensers 30 oz (887 ml) each	

Hiring details (a guide only)

EMS & Events Co-ordinator
Wreckair Hire
152 Grand Junction Rd
Blair Athol 5084

Disclaimer

Information on portable washstands is provided in good faith and is not an endorsement from the Department of Human Services or its agents.

Suppliers of portable handwashing facilities for hire or purchase can contact the Environmental Health Branch or the Communicable Diseases Control Branch, Department of Human Services for company details to be included on the internet version of this guideline.

Appendix 4 ~ Bibliography

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Notes
