CHAPTER 6.11.

ZOONOSES TRANSMISSIBLE FROM NON-HUMAN PRIMATES

Article 6.11.1.

Introduction

There are about 376 different species of non-human primates belonging to three suborders which are split into 15 families. The tree shrew family (previously considered as belonging to the primates) has not been included in these recommendations.

All non-human primate species are included in Appendix I or Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and may be transported internationally only if accompanied by the permits or certificates required under CITES.

Most imported non-human primates are destined for research, educational or breeding purposes and their sourcing should be in accordance with Article 7.8.7. Before non-human primates are used for any purpose, all alternatives to their use should be explored.

Public health and safety, *animal welfare* and pathogen introduction to wild populations are the primary issues of concern in the importation and keeping of non-human primates. This is especially true where close contact between humans and animals, their body fluids, faeces and tissues is likely to occur. Minimising the *risk* requires well-trained personnel and the following of stringent personal hygiene standards.

The likelihood of carrying zoonotic pathogens is related to the taxonomic position and the region of origin of the species concerned. It can be considered to increase from prosimians to marmosets and tamarins, then to other New World monkeys, to Old World monkeys and apes. The likelihood of carrying zoonotic agents is also greater in wild-caught non-human primates than in captive-bred animals which have been maintained in a well-defined environment under veterinary supervision. For non-human primates taken from the wild, usually only very limited health related information can be given by the supplier and by the *Veterinary Authority* of the *exporting country*.

Most pathogens referred to in this chapter are not included in the OIE List, and there is, consequently, no requirement to report them on a regular basis within the OIE animal disease reporting system. However, the requirement to report exceptional epidemiological events remains in effect.

Standards for diagnostic tests for some pathogens are described in the *Terrestrial Manual*.

Article 6.11.2.

General recommendations

Veterinary Authorities of *exporting countries* should issue *international veterinary certificates* only upon presentation of valid CITES documentation.

Veterinary Authorities should make sure that the animals are individually identified by approved methods that assure traceability and to avoid transmission of *disease* (see Chapter 4.15.).

For reasons of public health, *animal welfare* and pathogen introduction to wild populations, *Veterinary Authorities* of *importing countries* should not authorise the import of non-human primates for the purpose of being kept as pets.

In the case of a non-human primate being imported directly from a country within the natural range of the animal's species concerned, and where only limited diagnostic testing is available, *Veterinary Authorities* of *importing countries* should place more emphasis on quarantine procedures and less on veterinary certification. As a matter of principle, limited health guarantees given by the supplier or the *Veterinary Authority* of the country of origin should not constitute an obstacle to imports, but very strict post import quarantine requirements should be imposed. Particularly, the quarantine should meet the standards set in Chapter 5.9., and should be of sufficient length to minimise the *risk* of transmission of *diseases* where tests are not readily available or of limited value.

Veterinary Authorities of *importing countries* may reduce the quarantine requirements for non-human primates imported from premises with permanent veterinary supervision provided that the animals were born or have been kept for at least two years on these premises, are individually identified and accompanied by proper certification issued by qualified officials, and the official certification is supplemented by a complete documentation of the clinical history of each animal and its group of origin.

In cases where it is necessary to import non-human primates which are known or suspected to be carriers of a zoonotic *disease*, the import should not be restricted by any of these recommendations, provided that the *Veterinary Authority* of the *importing country* requires the placing of the animals in an establishment located on its territory which has been approved to receive them and which meets the standards set in Chapter 5.9.

Article 6.11.3.

General certification and transportation requirements

Veterinary Authorities of *importing countries* should require:

for all non-human primates

1) the presentation of an *international veterinary certificate* attesting that the animals:

   a) have been individually identified (the means of identification should be stated in the certificate); and

   b) have been examined on the day of shipment and found to be healthy, free from clinical signs of contagious *disease*, and fit for transport;

2) the attachment to the *international veterinary certificate* of all relevant records, including all *vaccinations*, tests and treatments performed during the lifetime of each primate before shipment;

3) the necessary CITES permit from the relevant *wildlife* authority;

4) the transport of the animals by air in accordance with the Live Animals Regulations of the International Air Transport Association or by rail or road under equivalent standards for surface transport.

Article 6.11.4.

Quarantine requirements for non-human primates from an uncontrolled environment

Veterinary Authorities of *importing countries* should require for shipments which originate from the wild or other sources where they were not subjected to permanent veterinary supervision:

1) the presentation of the documentation referred to in Article 6.11.3.;

2) the immediate placement of the animals in a *quarantine station* meeting the standards set in Chapter 5.9. for at least 12 weeks; and during this quarantine:

   a) all animals to be monitored daily for signs of illness and, if necessary, be subjected to a clinical examination;

   b) all animals dying for any reason to be subjected to complete post-mortem examination at a *laboratory* approved for this purpose;

   c) any cause of illness or death to be determined before the group to which the animals belong is released from quarantine;

d) animals to be subjected to the following diagnostic tests and treatments in accordance with Chapter 4.15.:

Disease/agent	Animal groups	Schedule	Methods
Endo- and ectoparasites	All species	At least two tests, one of which should be at the start, the other towards the end of the quarantine.	Testing methods and antiparasitic treatment as appropriate to species of animal and parasitic agent.
Tuberculosis (*Mycobacterium tuberculosis* complex)	Marmosets and tamarins	Two tests at an interval of 2 to 4 weeks.	Skin test or serology. In-vitro gamma interferon assay or polymerase chain reaction (PCR) assay. The skin test using mammalian tuberculin (old tuberculin) is the most reliable of all. Skin tests in marmosets, tamarins or small prosimians should be performed in the abdominal skin rather than in the eyelid. In some species (e.g. orang utan), skin tests for tuberculosis are notorious for false positive results. Comparative tests using both mammalian and avian PPD, together with cultures, radiography, ELISA, in-vitro gamma interferon assay and PCR of gastric or bronchial lavage, faeces or tissues may eliminate confusion.
	Prosimians, New World monkeys, Old World monkeys, gibbons and great apes	At least three tests at intervals of 2 to 4 weeks.	
Other bacterial pathogens (*Salmonella*, *Shigella* and *Yersinia* and others as appropriate)	All species	Daily test for 3 days after arrival, and at least one or two more tests at intervals of 2 to 4 weeks.	Faecal culture. The fresh faeces or rectal swabs should be cultured immediately or be placed immediately in the appropriate transportation medium.
Hepatitis B	Gibbons and great apes	First test during first week; second test after 3 to 4 weeks.	Serological tests for anti-hepatitis B core antigen and for hepatitis B surface antigen, and additional parameters as appropriate.

Veterinary Authorities of *importing countries* should recognize the public health importance of *zoonoses* listed in the table below as well as measles (a human disease, sometimes affecting non-human primates), hepatitis A, monkey pox, Marburg disease or Ebola/Reston virus, retroviruses, etc., even though this article does not recommend specific testing or treatment protocols for these agents during the quarantine period. *Veterinary Authorities* should recognize that, if animals are infected, the importation and spread of many such agents will be best controlled by the detection of clinical signs of *disease* during a 12-week quarantine period.

Certain endemic viruses, such as herpesviruses or retroviruses, may be present in both wild and captive populations of primates. These viruses are often asymptomatic in primate species. If animals are being imported to be introduced to other populations of the same species, it may be advisable to determine if the animals selected for importation have similar viral profiles to the established population.

Article 6.11.5.

Certification and quarantine requirements for marmosets and tamarins from premises under veterinary supervision

Veterinary Authorities of *importing countries* should require:

for marmosets and tamarins from premises under veterinary supervision

1) the presentation of an *international veterinary certificate* attesting that the shipment meets the requirements specified in Article 6.11.3., and that the animals:
   a) are either born in the premises of origin or have been kept there for at least two years;
   b) come from premises which are under permanent veterinary supervision, and where a suitable health monitoring programme is followed, including microbiological and parasitological tests as well as necropsies;
   c) have been kept in buildings and enclosures in which no *case* of tuberculosis has occurred during the last two years prior to shipment;
2) a description of the health monitoring programme implemented by the establishment of origin;
3) the placement of the animals in a *quarantine station* meeting the standards set in Chapter 5.9. for at least 30 days; and during this period:
   a) all animals to be monitored daily for signs of illness and, if necessary, be subjected to a clinical examination;

b) all animals dying for any reason to be subjected to complete post-mortem examination at a *laboratory* approved for this purpose;

c) animals to be subjected to the following diagnostic tests and treatments in accordance with Chapter 4.15.:

Disease/agent	Animal groups	Schedule	Methods
Bacterial pathogens (*Salmonella*, *Shigella* and *Yersinia* and others as appropriate)	All species	Daily test for 3 days after arrival.	Faecal culture. (See further comments in the Table of Article 6.11.4.)
Endo- and ectoparasites	All species	At least two tests, one of which should be at the start, the other towards the end of the quarantine .	Testing methods and antiparasitic treatment as appropriate to species of animal and parasitic agent.

Veterinary Authorities of *importing countries* should not normally require any tests for viral infections or for tuberculosis. However, stringent precautions to ensure human health and safety should be followed as recommended in Article 6.11.7.

Article 6.11.6.

Certification and quarantine requirements for other non-human primates from premises under veterinary supervision

Veterinary Authorities of *importing countries* should require:

for prosimians, New World monkeys, Old World monkeys, gibbons and great apes from premises under veterinary supervision

1) the presentation of an *international veterinary certificate* attesting that the shipment meets the requirements specified in Article 6.11.3., and that the *animals*:

   a) are either born in the premises of origin or have been kept there for at least two years;

   b) come from premises which are under permanent veterinary supervision, and where a suitable health monitoring programme is followed, including microbiological and parasitological tests as well as necropsies;

   c) have been kept in buildings and enclosures in which no *case* of tuberculosis has occurred during the last two years prior to shipment;

   d) come from premises in which no *case* of tuberculosis or other major *zoonoses* including rabies has occurred during the last two years prior to shipment in the building where the *animals* were kept;

   e) were subjected to a tuberculosis test on two occasions with negative results, at an interval of at least two weeks between each test during the 30 days prior to shipment;

   f) were subjected to a diagnostic test for pathogenic enteric bacteria including *Salmonella*, *Shigella* and *Yersinia*;

   g) were subjected to diagnostic tests for, and appropriate treatment against, endo- and ectoparasites;

   h) were subjected to a diagnostic test for hepatitis B virus and their current status documented (gibbons and great apes only);

2) the placement of the *animals* in a *quarantine station* for at least 30 days, and during this period:

   a) all *animals* to be monitored daily for signs of illness and, if necessary, subjected to a clinical examination;

   b) all *animals* dying for any reason to be subjected to complete post-mortem examination at a laboratory approved for this purpose;

   c) any cause of illness or death to be determined before the group to which the *animals* belong is released from quarantine;

d) *animals* to be subjected to the following diagnostic tests and treatments in accordance with Chapter 4.15.:

Disease/agent	Animal groups	Schedule	Methods
Tuberculosis *(Mycobacterium tuberculosis* complex)	All species	One test.	Skin test or serology. In-vitro gamma interferon assay or polymerase chain reaction (PCR) assay. (See further comments in the Table of Article 6.11.4.)
Other bacterial pathogens (*Salmonella*, *Shigella* and *Yersinia* and others as appropriate)	All species	Daily test for 3 days after arrival, and another test at least one week later.	Faecal culture. (See further comments in the Table of Article 6.11.4.)
Endo- and ectoparasites	All species	At least two tests, one of which should be at the start, the other towards the end of the quarantine.	Testing methods and antiparasitic treatment as appropriate to species of animal and parasitic agent.

Veterinary Authorities of *importing countries* may not normally require any tests for viral *diseases*. However, stringent precautions to ensure human health and safety should be followed as recommended in Article 6.11.7.

Article 6.11.7.

Precautionary measures to be followed by staff exposed to non-human primates or to their body fluids, faeces and tissues

The presence in most non-human primates of some zoonotic agents is almost unavoidable, even after release from quarantine. The relevant Authorities should, therefore, encourage the management of institutions whose staff are exposed to non-human primates or their body fluids, faeces or tissues (including when performing necropsies) to comply with the following recommendations:

1) to provide staff with training in the proper handling of primates, their body fluids, faeces and tissues, with respect to *zoonoses* containment and personal safety;
2) to inform their staff that certain species should be considered as having lifelong *infections* with some zoonotic agents, e.g. Asian macaques with Herpes B virus;
3) to ensure that the staff follows personal hygiene practices, including the use of protective clothing, and the prohibition of eating, drinking and smoking in potentially infective areas;
4) to implement a screening programme for personnel health, including monitoring for tuberculosis, pathogenic enteric bacteria and endoparasites and other agents that are deemed necessary;
5) to implement an immunisation programme as appropriate, including e.g. tetanus, measles, poliomyelitis, rabies, hepatitis A and B, and other *diseases*, such as yellow fever, endemic in the area of origin of the African and American non-human primates;
6) to develop guidelines for the prevention and treatment of *zoonoses* that may be transmitted by bites and scratches, e.g. rabies and herpes viruses;
7) to issue to their staff a card which states that they work with non-human primates or with their body fluids, faeces or tissues, and which may be presented to the medical profession in case of illness;
8) to dispose of carcasses, body fluids, faeces and tissues in a manner which is not detrimental to public health.