



AAP Minimum Husbandry Guidelines

Chimpanzee, *Pan troglodytes*

Foraging & Feeding	
Theoretical conclusion	→ Biological need to vary in food items. → Ethological need to perform foraging behaviour (searching/working for food).
Foraging opportunity	- Food is offered dispersed, ensuring that all animals in the group can eat. - Meals are presented in various ways (e.g. hidden, in food puzzles). - Fresh browse is fed multiple times a week if available.
Frequency	Feeding at least twice a day.
Other remarks	Food and water must be offered at multiple locations to ensure low-ranking individuals have adequate access to water/food sources. Cultivated fruits contain more sugars and less fibre compared to wild fruits. Therefore, not too much fruit should be fed, 5 to maximum 25% of the total weight of the diet.
Social interaction	
Theoretical conclusion	→ Ethological need for social contact with conspecifics. → Managerial need for gradual introductions of unfamiliar conspecifics.
Group structure (sex, age)	Social housing with conspecifics: at least 2, but preferably ≥4 individuals per group. Possible social structures: 1. multi-male/multi-female, with ♂♂ < ♀♀. 2. one male/multi-female group. 3. single sex group.
Group management	- There must be at least 2 indoor and 1 outdoor enclosure. - If animals are locked in the inside enclosures, there must be at least 2 hatches between the indoor enclosures.
Social introductions (hatches, acquaintance)	- There must be a possibility to have visual & protected contact (animals). - There must be a possibility to interfere during the physical phase (caretakers). - There must be escape routes available, i.e. animals should always be able to get away in a safe manner.
Other remarks	All-male groups should preferably not have visual contact with females. Regular observations of social groups is advised to find out whether (individuals in) the group is(/are) functioning well.

	Social introductions must be carefully considered, according to appropriate techniques.
Environment	
Theoretical conclusion	<ul style="list-style-type: none"> → Biological need to perform natural locomotion behaviour (e.g. climbing). → Biological need for shelter from sun/rain/wind/cold. → Ethological need for hiding/retreat (from conspecifics and from humans).
Accessible space (indoor m ² , outdoor m ² , height)	<p>A space as large as possible to maintain natural locomotion and foraging, at least:</p> <p><u>Indoor</u> 160 m² per 1-2 animals, 4m high + 20 m² per extra individual for 1-8 additional animals. + 40 m² per extra individual for nine and more additional animals.</p> <p><u>Outdoor</u> 160 m² per 1-2 animals, 4m high + 25 m² per extra individual for 1-8 additional animals. + 40 m² per extra individual for nine and more additional animals. Outdoor enclosure accessible at least 6 hours per day.</p>
Environmental parameters	<ul style="list-style-type: none"> - Temperature indoor enclosure at least 16°C. - Above 30°C cooling (e.g. fan/air conditioning, shallow pool, mist, sprinklers) is provided. - Optimal indoor humidity 30%-70%. - Preferably natural lighting indoors.
Structural elements (does furnishing meet behavioural needs such as locomotion pattern)	<ul style="list-style-type: none"> - Climbing structures with horizontal perching areas, varying in size and height, that allow for resting, eating, and social behaviour (providing space for several animals at a time). - Materials to play or swing. - Optimal use of enclosure height must be ensured.
Visual barriers	Multiple out of sight areas so the animals can retreat from each other, from neighbouring animals and/or from humans.
Resting areas	<ul style="list-style-type: none"> - The number of resting areas depends on group size: 1-3 animals: 1 per animal >3 animals: #animals / 2 (round up) - At least one resting area must be large enough for the entire group. - Materials for buildings nests (e.g. branches, straw, shredded paper, blankets) must be available.
Shelters	<ul style="list-style-type: none"> - The number of sheltered areas depends on group size: 1-3 animals: 1 shelter area per animal >3 animals: #shelter = (#animals/3) + 1 (round up)

	- In the outdoor enclosure(s) shelter areas must provide shade and protection against rain/wind.
Substrate	Floor with natural substrate like grass or soil, or bedding material, like bark mulch, wood chips, leaf litter, wood wool, straw, hay, shredded paper or wood shavings.
Escape routes	2 hatches between enclosures must be available. Escape routes must be available, i.e. animals should always be able to get away in a safe manner.
Other remarks	The environment must be safe for all individuals living in it; e.g. no sharp edges which can cause wounds, spaces need to be small (or large enough) so body parts cannot get stuck, structures need to be solid/connected securely ('chimp proof') so nothing will disintegrate. Make sure electricity, lights etc cannot be reached by the chimpanzees, as they will break it.
Behaviour management	
Theoretical conclusion	→ Ethological need to perform exploratory behaviour. → Managerial need for approaching/handling/shifting/separating animals.
Enrichment frequency	Enrichment preferably every day, at least every other day.
Animal training	Animals are trained using positive reinforcement to reduce stress for transportation or medical treatments.
Catch & restraint	Advisable to have a possibility to connect transport box or tunnel to enclosure in order to be able to train animals.
Other remarks	Enrichment should be alternated and temporarily removed in order to stay interesting to the animals.
Safety	
Theoretical conclusion	→ Managerial need for safety procedures (protection of animals and people).
Preventing escape	- Enclosures surrounded by a fence/wall/moat. - Open top enclosures with a wall (e.g. from glass, metal, wire mesh, concrete) that must not be climbable. - A water moat wide enough so the animals cannot jump over, and deep enough so they cannot walk through. A water moat must always be accompanied by an extra electric fence system. - An emergency power system must be in place when using electric fencing. - Doors/hatches are visible from the location of operation. - Doors/hatches are equipped with a double lock system. - There are at least 2 doors between the enclosure and public area.
Safety measures (public)	Stand-off barrier to avoid contact with the actual enclosure (unless closed wall).
Safety measures (caretakers)	- Enclosures are designed for proper and safe cleaning. - At places where keepers operate hatches/doors, a barrier is used to prevent the risk of chimpanzees grabbing staff. - Hatches/doors are remotely operable.

Veterinary issues	Chimpanzees are susceptible to many human diseases. Infectious diseases can be transmitted from humans to chimpanzees and the other way around.
Other remarks	<p>Chimpanzees are excellent escape artists. Make sure their possibilities to use trees/structures/hills to extend their jumping heights or lengths are limited.</p> <p>Highly tensile electric fencing can be used as supporting barrier, but cannot be used as primary barrier.</p> <p>When an artificial rock wall is used as a barrier, ensure that the surface does not provide escape routes.</p> <p>Water moats must have a shallow end at the side of the enclosure, so animals will be able to climb back in the enclosure when they ended up in the water, to reduce the risk of drowning.</p>

-