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Risks for children in close contact with non-traditional pets (NTP), in public spaces[1]

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In various public spaces, children may be exposed to risks linked to close contact with "non-traditional pets" (NTP), whether domestic (rabbits, ruminants, pigs, poultry, etc.) or non-domestic [rodents. (rats, mice, etc.), hedgehogs, reptiles, amphibians, birds] (1).

Zoos and water parks

If the regulatory framework imposes "biosecurity" rules (2) to limit risks, the boundary is sometimes blurred between the public and animals, and risks are linked to some contexts:

- dipping hands without gloves in pools to caress fish or other aquatic species, which expose children to contamination by *Mycobacterium marinum* or red mullet bacillus;
- behind-the-scenes tours allowing children to improvise as "apprentice caregivers" or "caretakers for a day" of some animals;
- "*petting zoos*" (or mini-farms) which, in the absence of "biosecurity" rules, encourage close contacts with animals;
- proximity of these enclosures to a catering area, children being invited to feed animals with food that can be bought with the entry ticket. The risk of fecal-oral transmission of different pathogens (enterohemorrhagic *Escherichia coli* (ECEH), *Salmonella* spp., *Campylobacte*r spp., *Cryptosporidium* spp, etc.) excreted by apparently healthy animals has been highlighted (3, 4).

Educational farms

Since the beginning of the 2000s, the sharp increase in visits to educational farms has led to the observation of numerous cases of hemorrhagic-uremic syndrome (HUS) in young children exposed to contacts with asymptomatic ruminants that are reservoirs of ECEH (5-7). Exposure was linked to contact with animal manure and the natural hand/mouth behavior of children under 5, an age not well sensitive to hand washing recommendation. In France, the study of 1215 cases of HUS revealed that 20% followed contacts with a farm animal or the floor of its enclosure in the event of a fall (8).

Schools, hospitals, and other public places

At school, the presence of NTP exposes people to the risk of various diseases: salmonellosis (poultry, hedgehogs, snake molting); ringworm (hedgehog); rabies (bat). At hospital, particularly for children under immunosuppressive treatment, lymphocytic choriomeningitis can result from contacts with rodents (mice, hamster) (9, 10). A zoonotic disease (mullet, brucellosis, mycobacteriosis, leptospirosis, etc.) can result from contact with a marine mammal died from one of these diseases and washed up on a beach.

Considering that the risks linked to close contacts of children with NTPs in public spaces are underestimated, the French National Academy of Medicine [(1)]:

- recalls that, if the links between animals and children are factors of well-being, good mental health, and enrichment of knowledge, they must give rise to health precautions for youngest or immunocompromised children;
- calls, using a "one health" approach, for an epidemiological surveillance of childhood zoonoses, in order to prevent and treat in time these diseases;
- recommends that the general public be informed of the potential risks linked to close contacts between young children and NTPs, that hand washing should be the rule after touching such an animal, and that "biosecurity" rules be established and displayed in establishments welcoming children and NTP, in particular those concerning hygiene and safety, after approval by the Departmental Directorates for Population Protection;
- strongly recommends, as does Public Health France, that children under 5 do not touch NTP (ruminants, in particular) in public spaces.
- recommends a ban on catering areas too close to a mini-farm (or a "*petting zoo*"), in order to prevent young children from feeding animals while eating their own meals.

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