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## **Species sheet – All about horses!**



In 2022, the IFCE estimated that there were over a million equines in France. Surely you've met them in the countryside: but how well do you know them? Let's dive into this new species sheet!

*This species sheet was reviewed by Hélène Roche, ethologist and science popularizer, Léa Lansade, ethology researcher at INRAE, and Isabelle Desjardins, veterinarian and teacher at VetAgro Sup's Clinéquine, specialist in equine internal medicine and intensive care.*

# All about horses!

## ID CARD



**Scientific name:** EQUUS CABALLUS (DOMESTICUS)  
**Order:** PERISSODACTYLES  
**Family:** EQUIDAE  
**Life expectancy:** 30 TO 40 YEARS  
**Gestation:** ~340 DAYS  
**Domestication:** ~2200 YEARS B.C.  
**Signature:** Tornado

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## + Physiology

There are 397 horse breeds in the world, including 54 in France.



♥ 32 to 44 BPM  
🌡️ 37,5 to 38,5 °C  
🐾 Monogastric Herbivore



Average size: 70cm - 2m (at withers)

## Social behavior

### Social cohesion

Horses live on a family (*harem*) made up of a few mares (*usually 2 to 4*) and a stallion, who share strong, lasting social bonds

Youngsters leave the harem at age 2 or 3, and single males can form groups

### Dominance

A dominant horse has priority access to a resource (*shade, water trough, rack, conspecific*)



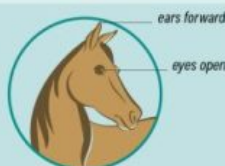
### Leadership

Each horse in the group can initiate an activity, but **some individuals** are influential than others.



## Communication signals

Horses communicate their emotions through **postures, facial expressions, and vocalizations**. Here are some **communication signals**



Curious horse



Aggressive horse



Relaxed horse

## Cognitive skills

Reduced short-term memory (*twenty seconds at the most*) but once they have learned something, they can remember it for months or even years

Able to perceive a congener's emotions, even on video

Able to recognize individual humans in photos



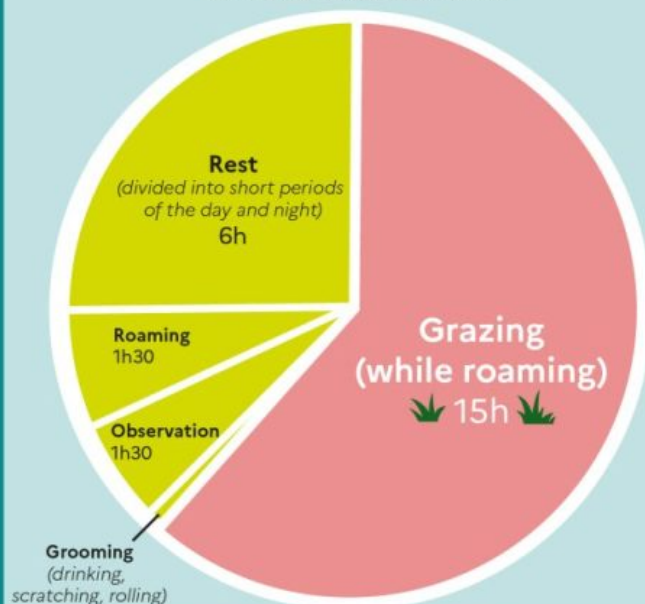
### DID YOU KNOW?

Horses can recognize a photo of a familiar person **even after 6 months**



## Typical day

in natural conditions



\*This distribution of activities varies according to physiological stage, age, gender, weather conditions and season.

# Sensory abilities

## Vision

Panoramic field of view (340°)



Horses' eyes are slightly oriented towards the ground: they need to raise their neck to see far, lower it to see near

They see **blue** and **yellow** but can't seem to discern **red** and **green** (like color-blind people!)



### DID YOU KNOW?

A horse can't see under or over its body!

Horses have a very good perception of even subtle **movements**



But are very slow to **adapt** to changes in light conditions (even though they can see well in twilight)

## Taste

Horses can only detect **4 tastes** (acid, salty, sweet, bitter)

They like to **diversify their diet** and can consume around fifty different plants a day in their natural state

## Smell

Its sense of smell is used for **communication** (congeners recognition) and **exploration**

The **vomerinal organ**, located in the nasal cavities, enables the «**flehmen**» response to analyze odors and pheromones



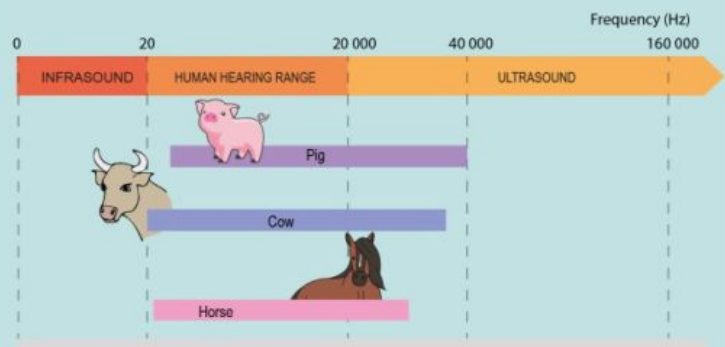
### DID YOU KNOW?

To recognize each other, horses use their sight as well as their sense of smell via nasal contact

## Hearing

Horses are sensitive to **ultrasound** (not heard by humans) but not to **certain low-pitched sounds** (heard by humans)

The pinnae of their ears can **move independently** to localize a sound



## Touch

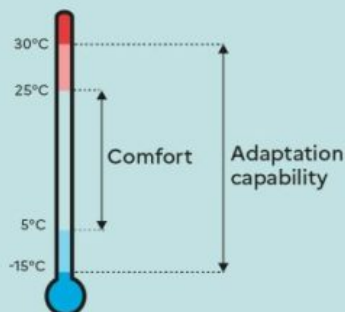
Sensitivity to touch



Green: Most sensitive areas

Purple: Areas of privileged contact between horses

Thermal sensitivity\*



A horse's skin is thicker than a human's, but its **epidermis is just as thin and contains just as many nerve endings**

The horse is equipped with **vibrissae** around eyes, nose and mouth, which complete its eyesight: clipping them is a form of **ill-treatment** forbidden in competition ((on pain of elimination))



### DID YOU KNOW?

Horses' overall skin sensitivity is higher than that of our fingertips. A horse can feel a fly landing on its back!

\*Thermal comfort in horses depends on the breed of animal, and temperature perception depends on humidity and temperature