



Guttural Pouch Tympany (GPT)

Information used with permission of Dr. Ottmar Distl, Institute for Animal Breeding and Genetics at the University of Veterinary Medicine Hannover, Germany

1. What is guttural pouch tympany (GPT)?

Equine GPT is characterized by an exceeding accumulation of air in the guttural pouches. The guttural pouches are mucosal bulges of the auditory tube and are therefore part of the upper respiratory tract. In case of GPT, air can flow into the guttural pouch but cannot leave it. The exact cause and developmental mechanism for GPT is still unknown.

2. What are the symptoms of GPT?

- soft, compressible and not-painful swelling in the parotidea region, that can be unilateral or bilateral; the swelling can enlarge with progress of the disease
- enforced breathing and snoring respiratory noise, because the enlarged guttural pouches compress the pharynx and larynx
- swallowing problems because of the compressed pharynx; optionally also discharge of milk and fodder from the nostrils
- clear to purulent nasal discharge, cough and high temperature, because of increased susceptibility to respiratory infections
- in severe cases life-threatening pneumonia, because swallowing problems can lead to inhalation of milk or fodder into the lungs

3. Which horses are affected?

GPT is a rare disease and it occurs especially in foals and young horses up to an age of 1 year. Females are affected twice to fourfold as frequently as males. For Arabians there seems to be a breed disposition. But GPT also occurs in other breeds, e.g. English thoroughbred, Standardbred trotters, Quarter horse, Paint horse, Appaloosa, American saddle horse, Frisian horse, Hanoverian, Trakehner, Oldenburger, Holsteiner and other warmblooded horses.

4. How can the disease be diagnosed?

In most cases your veterinarian will be able to diagnose GPT by means of typical clinical symptoms. Diagnose can be confirmed by



Photo: Clinic for horses of University of Veterinary Medicine Hannover

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endoscopic examination of the respiratory tract. The endoscope is moved into the guttural pouch, the accumulated air can exhaust and therefore the typical swelling in the parotidea region disappears. Additionally, x-raying can be helpful.

5. How can the disease be treated?

In few cases GPT can disappear without treatment during progressing growth of the foal. However, in most cases veterinary treatment is indispensable. The accumulated air can be removed by puncture of the guttural pouch or by insertion of a catheter into the guttural pouch. But often this treatment only leads to transitional recovery, because afterwards air re-accumulates in the guttural pouch. To achieve enduring treatment success, the foal normally has to be surgically treated. There are several different surgical techniques. The Clinic for Horses of the University of Veterinary Medicine developed a minimal-invasive surgical technique which does not require general anesthesia. Minimization of anesthetic risk is especially important in patients with existing complications like respiratory infections and pneumonia. For further information please contact your veterinarian.

If you are willing to support our study, please contact us:

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(List provided by: AHA Equine Stress, Research and Education Subcommittee on Genetic Disorders)

1. Zetiz A, et al. Whole-genome scan for guttural pouch tympany in Arabian and German warmblood horses. *An Gen.* 2009;40(6):917-24.
<http://www.ncbi.nlm.nih.gov/pubmed/19703122>
2. Guttural Pouch Tympany - TheHorse.com Ask the Vet (August 2, 2009)
<http://www.thehorse.com/ViewArticle.aspx?ID=14642>
3. Mazan M. Guttural Pouch Tympany, PetPlace.com. <http://www.petplace.com/article-printer-friendly.aspx?id=2945>
4. Guttural Pouch Tympany - The Merck Veterinary Manual Online (2008)
<http://merckvetmanual.com/mvm/index.jsp?cfile=htm/bc/121330.htm>

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5. Marcella K. The mysterious guttural pouch. Thoroughbred Times, January 30, 2006. <http://www.thoroughbredtimes.com/horse-health/2006/January/30/The-mysterious-guttural-pouch.aspx>
6. Blazyczek I, et al. Inheritance of Guttural Pouch Tympany in the Arabian Horse. J Hered 2004;95(3):195-99. <http://jhered.oxfordjournals.org/cgi/content/full/95/3/195>
7. Blazyczek I. Population genetic analysis of guttural pouch tympany in foals. Dissertation, 2002. http://deposit.ddb.de/cgi-bin/dokserv?idn=967171865&dok_nam=abstract&dok_ext=htm&filename=967171865.htm (scroll down screen for English version)

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