Golden Vet Physio
Canine & Equine Physiotherapy

# Canine Vestibular Disease
# An Informative Guide

## What is Vestibular Disease?

**Vestibular disease** affects the **vestibular system**, which is responsible for maintaining **balance, spatial orientation, and coordination of eye and head movements.**
It can involve:

- The **peripheral vestibular system** (inner ear and cranial nerve VIII)
- The **central vestibular system** (brainstem and cerebellum)

## Types of Vestibular Disease

1. **Peripheral Vestibular Disease**
    - Most common form
    - Affects the **inner ear, vestibulocochlear nerve (CN VIII),** or receptors in the **bulla**
    - Causes: Otitis media/interna, idiopathic (geriatric), trauma, ototoxic drugs
2. **Central Vestibular Disease**
    - Affects the brainstem or cerebellum
    - Causes: Neoplasia, meningitis/encephalitis, infarct, trauma, toxins

## Clinical Signs

- Head tilt (toward the affected side in peripheral; variable in central)
- Ataxia (drunken gait) with preserved strength
- Nystagmus (rapid eye movement) – horizontal, vertical, or rotary
- Strabismus (abnormal eye position)
- Circling (typically toward the lesion)
- Nausea and vomiting
- Falling or rolling to one side

## Central disease may also present with:

- Altered mental status
- Vertical nystagmus
- Postural deficits
- Multiple cranial nerve deficits

## Idiopathic Vestibular Disease (Geriatric Vestibular Syndrome)

- Sudden onset
- No known underlying cause
- Typically improves within 7–14 days
- Full recovery may take several weeks
- Residual head tilt may persist

## Diagnosis

- Neurological exam (distinguish central vs. peripheral)
- Otoscopic exam and imaging (CT/MRI)

Tel: 07772 369962 / Email: Olivia@goldenvetphysio.co.uk / Website: www.goldenvetphysio.co.uk

- Bloodwork to rule out metabolic causes
- CSF analysis (if central involvement suspected)

## Treatment Overview

1. **Idiopathic cases:**
    - Supportive care (IV fluids, antiemetics, nursing)
    - Usually self-limiting
2. **Otitis-associated cases:**
    - Antibiotics (based on culture/sensitivity)
    - Myringotomy ± surgery if needed (e.g., bulla osteotomy)
3. **Central disease:**
    - Directed treatment (e.g., corticosteroids, anti-inflammatories, antimicrobials, oncology referral)

## Role of the Veterinary Physiotherapist

Physiotherapy supports **neurological recovery**, promotes **compensation**, and helps restore **confidence in mobility**.

## Rehabilitation Goals

| Phase | Timeframe | Focus |
|---|---|---|
| Acute | 0–7 days | Supportive care, reduce nausea, assisted standing |
| Subacute | 1–3 weeks | Gait re-education, balance retraining |
| Recovery | 3–6+ weeks | Proprioception, strength, adaptation to residual deficits |

## Core Physiotherapy Interventions

- **Postural adjustments** and **head control** exercises
- **Assisted standing** and **walking** with harness or sling
- **Proprioceptive retraining** using:
    - Cavaletti rails
    - Balance pads
    - Weight-shifting drills
- **Vestibular habituation techniques** (controlled head movements)
- **Sensory stimulation** to enhance neuroplasticity
- **Hydrotherapy** – Safe environment for gait and balance retraining
- **Environmental modification advice** (non-slip surfaces, grip socks)

## Key Physiotherapy Objectives

- Support **safe ambulation** and prevent injury (fall risk)
- Retrain **vestibulo-ocular reflex** and postural reactions
- Promote **neurocompensation** and reduce disorientation
- Enhance **proprioceptive accuracy and limb placement**
- Educate owners on **realistic expectations** and home care

**Early physiotherapy improves recovery in both idiopathic and secondary vestibular cases. Most dogs show significant improvement with time, support, and a structured rehabilitation plan.**