



**AUSTRALIAN AND NEW ZEALAND  
COLLEGE OF VETERINARY  
SCIENTISTS**

**MEMBERSHIP GUIDELINES**

*Small Animal Dentistry and Oral Surgery*

**INTRODUCTION**

These Membership Guidelines should be read in conjunction with the *Membership Candidate Handbook*.

**ELIGIBILITY**

Refer to the *Membership Candidate Handbook*.

**OBJECTIVES**

To demonstrate that the candidate has sufficient knowledge of and experience in Small Animal Dentistry and Oral Surgery to be able to give sound advice in this field to veterinary colleagues.

**LEARNING OUTCOMES**

The candidate is expected to be able to confidently apply the following knowledge to the diagnosis and treatment of diseases of the oral cavity:

- A. A **sound**<sup>1</sup> knowledge of the basic principles of veterinary medicine and surgery.
- B. A **sound** knowledge (dogs and cats, lagomorphs and rodents) and **basic** knowledge (other animals including exotics) of:

**1. Oral and Paradental Anatomy, Embryology, Physiology and Function**

The osseous, nervous, muscular and vascular anatomy, embryology, physiology and function of the oral cavity and related structures. **Basic** knowledge of comparative oral anatomy in mammals.

- Dental and periodontal anatomy, embryology, physiology and function, including an understanding of head shapes, dentition and occlusion
- Sequence of tooth development and eruption

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<sup>1</sup> **Knowledge levels:**

**Sound knowledge** — candidate must know all of the principles of the topic including some of the finer detail, and be able to identify areas where opinions may diverge. A middle level of knowledge.

**Basic knowledge** — candidate must know the main points of the topic and the core literature

## **2. Anaesthesia and Analgesia**

- Use of local anaesthetics and nerve blocks in small animal dentistry
- Discuss a balanced approach to anaesthesia and analgesia of small animal patients undergoing dental procedures including basic knowledge of the drugs used

## **3. Oral Radiology**

- Extra and intra-oral radiology
- Radiographic positioning techniques
- Identification of oral pathology and trauma from examination of oral radiographs
- Occupational health and safety – risk assessment and treatment

## **4. Periodontal Disease**

- Aetiology, pathogenesis and clinical signs of periodontal disease
- Periodontal therapy
- Periodontal surgery
- Homecare advice and homecare products

## **5. Oral Disease**

The aetiology, pathogenesis, diagnosis and treatment of:

- Developmental and congenital abnormalities of the oral cavity
- Acquired conditions of the oral cavity, including:
  - Inflammatory conditions
  - Oral neoplasia
  - Immune mediated diseases of the oral cavity
- Dental and oral trauma
- Diseases of other body systems that have oral manifestations or consequences, including viral, bacterial and fungal diseases

## **6. Oral Surgery**

- Exodontics
- Periodontal surgery
- Oral soft tissue surgery
- Surgery of oral and maxillofacial orthopaedic trauma
- Oral tumour surgery
- Suture materials, suturing techniques, the wound healing process and factors affecting it

## **7. Endodontics**

- Aetiology and pathogenesis of pulpal pathology
- The clinical signs and treatment of endodontic disease
- Endodontic techniques
- Re-implantation of avulsed teeth, stabilisation, follow up treatment and prognosis

## **8. Restorative Dentistry**

- Composition of, indications for and use of dental restorative materials

## **9. Prosthodontics**

- Crown preparation and cementing techniques
- Impression materials and impression taking, making of stone models

## **10. Orthodontics**

- Significance of head shapes on the development of dental disease
- Common malocclusions and their management (Class I-IV)
- Ethical considerations when dealing with veterinary orthodontic procedures
- Orthodontic principles
- Orthodontic techniques as applicable to dogs and cats
- Malocclusions in lagomorphs and rodents, aetiologies, consequences and treatments

## **11. Dental Instrumentation**

- Range and use of hand and power instrumentation. The identification and indications for their uses in specific situations:
  - Periodontal therapy
  - Oral surgery
  - Endodontics
  - Restorative dentistry
  - Orthodontics

## EXAMINATIONS

For information on both the standard required and the format of the written and oral examinations, candidates are referred to the *Membership Candidate Handbook*. The Membership examination has **two separate components**:

1. **Written Examination** (*Component 1*)  
**Written Paper 1** (two hours): Principles of the Subject  
**Written Paper 2** (two hours): Applied Aspects of the Subject
2. **Oral Examination** (*Component 2*)  
**Oral** (approximately one hour)

The written examination will comprise of two separate two-hour written papers taken on the same day. There will be an additional 15 minutes perusal time for each paper, during which no writing on the examination paper is permitted. In each paper you are provided with four (4) questions to answer, worth 30 marks each, giving a total of 120 marks per paper. There is no choice of questions. Questions may be long essay type, a series of shorter answer sub-questions, or multiple-choice questions. Marks allocated to each question and to each subsection of questions will be clearly indicated on the written paper.

### **Written Paper 1:**

This paper is designed to test the Candidate's knowledge of the principles of Small Animal Dentistry and Oral Surgery as described in the Learning Outcomes using essay-style, short answer, note-point formats and multi-choice. Answers may cite specific examples where general principles apply, but should primarily address the theoretical basis underlying each example.

### **Written Paper 2:**

This paper is designed to (a) test the Candidate's ability to apply the principles of Small Animal Dentistry and Oral Surgery to particular cases/problems or tasks and (b) test the Candidate's familiarity with the current practices and current issues that arise from activities within the discipline of Small Animal Dentistry and Oral Surgery in Australia and New Zealand using essay-style, short answer and note-point formats.

### **Oral Examination:**

This examination requires the candidate to demonstrate achievement of the above mentioned Learning Outcomes. Discussion will be predominantly but not exclusively based on case material. The duration of this examination is approximately one (1) hour. Images and laboratory results will be used during this examination. Six (6) cases are presented with associated questions asked verbally in a face-to-face setting. The oral examination has a total of 120 marks with cases allocated between 15 and 25 marks each.

## RECOMMENDED READING MATERIAL

The candidate is expected to read widely within the discipline, paying particular attention to areas not part of their normal work experiences. This list of books and journals is intended to guide the candidate to some major references and other source material. Candidates also should be guided by their mentors. *The list is not comprehensive and is not intended as an indicator of the content of the examination.*

### Recommended reading list<sup>2</sup>:

Wiggs RB and Lobprise HB. Veterinary Dentistry Principles & Practice. Philadelphia: Lippincott Raven, 1997.

DuPont GA and DeBowes LJ. Atlas of Dental Radiography in dogs and cats. St Louis: Saunders Elsevier, 2009.

Verstraete FJM and Lommer MJ. Oral and maxillofacial surgery in dogs and cats. Philadelphia: Saunders, 2012.

Holmstrom SE, Frost P, Eisner ER. Veterinary Dental Techniques. 3rd ed. Philadelphia: WB Saunders, 2004.

American Veterinary Dental Society. STEP-BY-STEP Compendium. Volume 1.

American Veterinary Dental Society. STEP-BY-STEP Compendium. Volume 2.

American Veterinary Dental Society. STEP-BY-STEP Compendium. Foundations.

Niemiec BA, Veterinary Endodontics. Practical Veterinary Publishing, 2012.

Niemiec BA. Small Animal Dental, Oral and Maxillofacial Disease: A Colour Handbook. Manson Publishing, 2011.

Niemiec BA. Veterinary periodontology Wiley Blackwell, 2013.

Tutt C. Small Animal Dentistry: A Manual of Techniques. Blackwell Publishing, London, 2007

**Please note.** *Veterinary Dentistry Principles and Practice is considered the most comprehensive Veterinary dentistry text. This book is out of print and may be difficult or cost prohibitive to purchase. The last four texts may serve to offer additional information to candidates in topics they feel are not sufficiently covered elsewhere.*

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<sup>2</sup>Definitions of Textbooks

**Recommended textbook** – candidates should own or have ready access to a copy of the book and have a sound knowledge of the contents.

**Additional references** – candidates should have access to the book and have a basic knowledge of the contents.

### **Recommended journals<sup>3</sup>:**

Journal of Veterinary Dentistry

### **Additional references:**

Hargreaves KM and Cohen MA. Cohen's Pathways of the Pulp. 10th ed. St. Louis: Mosby, 2010.

Newman MG, Takei H, Klokkevold PR, Carranza FA. Carranza's Clinical Periodontology. 12th ed. Philadelphia: Saunders, 2014.

Anusavice KJ. Phillip's Science of Dental Materials. 12th ed. Philadelphia: WB Saunders, 2013.

Tranquilli WJ et al eds. Lumb and Jones Veterinary Anesthesia and Analgesia. 4th ed. Baltimore: Williams and Wilkins, 2007.

Capello V and Gracis M. Rabbit and Rodent Dentistry Handbook, 2005

Powers JM. Craig's Restorative Dental Materials. 12th ed. St Louis: Mosby Elsevier, 2006.

Evans HE. Miller's Anatomy of the Dog. 4th ed. Philadelphia: WB Saunders, 2012

Proffit WR and Fields HW. Contemporary Orthodontics. 5th ed. St. Louis: Mosby-Year Book, 2013.

Nanci A. Ten Cate's Oral Histology: Development, Structure, and Function. 8th ed. St. Louis: Mosby, 2012.

### **FURTHER INFORMATION**

For further information contact the College Office

Telephone: International +61 (07) 3423 2016

Email: [examinations@anzcvs.org.au](mailto:examinations@anzcvs.org.au)

Web: [www.anzcvs.org.au](http://www.anzcvs.org.au)

Postal Address: Building 3, Garden City Office Park, 2404 Logan Road  
EIGHT MILE PLAINS QLD 4113 Australia

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<sup>3</sup> **Definitions for journals:**

**Recommended Journal** – candidates should have ready access to either print or electronic versions of the journal and have a sound knowledge of the published articles in the subject area.

**Additional Journal** – candidates should be able to access either printed or electronic versions of the journal and have a basic knowledge of the published articles in the subject area.