The following list of study references is NOT a definitive, exhaustive list for preparing for the ACVPM examinations. A listed reference may be applicable to more than one category. Use this list as a guide, in as much as it represents a compromise between brevity and completeness. You are encouraged to read as much additional material as possible. Reading the current scientific and professional literature (e.g. JAVMA, MMWR, Lancet, NEJM, Science, Journal of Food Protection, etc.) is also necessary to properly prepare for the examinations.

References marked with a "P" are primary references. An "S" indicates supplementary titles provided for those who wish to do additional reading.

1. ENVIRONMENTAL HEALTH

The Environmental Health and Toxicology Section includes nine topic areas, with an equal number of questions from each topic area in the multiple choice section of the exam. Applied knowledge of toxicology is incorporated into many of the topic areas. The Toxicology section is more specific to the principles of toxicology and toxic substances in general. Each topic area and suggested reference materials for each are listed below:

<table>
<thead>
<tr>
<th>Topic Area</th>
<th>Suggested Reference Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Environmental Health:</td>
<td>• The Merck Veterinary Manual by Cynthia M. Kahn and Scott Line, 10th edition, 2010, Merck</td>
</tr>
<tr>
<td>Air</td>
<td>Publishing Group (P) <a href="http://www.merckmanuals.com/vet/index.html">http://www.merckmanuals.com/vet/index.html</a></td>
</tr>
<tr>
<td>2. Environmental Health:</td>
<td>• Human-Animal Medicine: Clinical Approaches to Zoonoses, Toxicants, and Other Shared Health</td>
</tr>
<tr>
<td>Land/Soil</td>
<td>Risks, Peter Rabinowitz and Lisa Conti, editors, 2010, Saunders/Elsevier (There are</td>
</tr>
<tr>
<td>3. Environmental Health:</td>
<td>several non-infectious disease chapters that are applicable.) (P)</td>
</tr>
<tr>
<td>Water</td>
<td>• Osweiler, G.D.: Toxicology, 1996, Williams and Wilkins, Media, PA (P)</td>
</tr>
<tr>
<td>4. Waste</td>
<td>• Websites: EPA, NCEH, NIOSH, OSHA, USDA, ABVT, etc. (P)</td>
</tr>
<tr>
<td></td>
<td>• Salvato, JA, Nemerow, N; Agardy, FJ; Sullivan, P (ed): Environmental Engineering, 6th</td>
</tr>
<tr>
<td></td>
<td>• Koren, H; Bisesi, M: Handbook of Environmental Health (2 volumes), 4th edition, 2002</td>
</tr>
<tr>
<td></td>
<td>CRC Press/Lewis publishers, Boca Raton, FL (S)</td>
</tr>
<tr>
<td></td>
<td>• Klaassen, C.D.: Casarett &amp; Doull's Toxicology: The Basic Science of Poisons, 8th edition,</td>
</tr>
<tr>
<td></td>
<td>2013, McGraw-Hill, New York, NY (S)</td>
</tr>
</tbody>
</table>
5. Emergency Preparedness and Response

- Websites: EPA, NCEH, NIOSH, OSHA, USDA, ABVT, etc. (P)

6. Occupational Health
7. Vectors

- Human-Animal Medicine: Clinical Approaches to Zoonoses, Toxicants, and Other Shared Health Risks, Peter Rabinowitz and Lisa Conti, editors, 2010, Saunders/Elsevier (There are several non-infectious disease chapters that are applicable.) (P)
- Websites: EPA, NCEH, NIOSH, OSHA, USDA, ABVT, etc. (P)

8. Radiation

- Websites: EPA, NCEH, NIOSH, OSHA, USDA, ABVT, etc. (P)

9. Toxicology

- Osweiler, G.D.: Toxicology, 1996, Williams and Wilkins, Media, PA. (P)
- Websites: EPA, NCEH, ATSDR, NIOSH, OSHA, USDA, ABVT, etc. (P)

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2. INFECTIOUS DISEASES

- Fenner's Veterinary Virology, 4th edition, N. James Maclachlan and Edward Dubovi editors. (P)
- Equine Infectious Diseases, Debra Sellon and Maureen Long, 2007 (P)
• Veterinary Immunology – 8th Edition, Ian Tizard, 2008 (P)

• Veterinary Medicine: A textbook of the disease of cattle, sheep, goats, pigs and horses , 10th Edition, Radostitis, Gay, Hinchcliff, Constable, 2007 (P)


• Handbook of Zoonoses : Identification and Prevention, Colville and Berryhill, 2007 (P)

• Brucellosis Eradication: Uniform Methods and Rules – USDA, APHIS, Veterinary Services 2003 (P)

• Bovine Tuberculosis Eradication: Uniform Methods and Rules- USDA, APHIS, Veterinary Services, 2005 (P)


3. FOOD SAFETY


• Review basics on foodborne outbreak investigations and calculations in an appropriate epidemiology textbook. No specific text required. For example: a few pages in Epidemiology by Leon Gordis (W. B. Saunders) or the booklet, Procedures to Investigate Foodborne Illness, (International Association for Food Protection, www.foodprotection.org) includes this information. (P)

• www.avma.org (in topic area) (P)

• www.cdc.gov (in topic area – site includes access to MMWR) (P)

• www.cfsan.fda.gov (in topic area – includes access to the FDA Food Code and the Pasteurized Milk Ordinance) (P)

• www.fda.gov/cvm (in topic area) (P) www.fsis.usda.gov (P)

• www.usda.gov (other USDA agencies have activities in topic area – APHIS, etc.) (P)

• www.foodsafety.gov (P)

• www.who.int (in topic area) (P)

• Review basic material in topic area in journals such as the Journal of Food Protection and JAVMA. (S)

4. PUBLIC ADMINISTRATION AND HEALTH EDUCATION


• Principles and Practice of Public Health Surveillance, 2nd ed., by Steven M. Teutsch (Editor), R. Elliott Churchill (Editor), Oxford University Press, USA, 2000. (P)


• Public Health Administration: Principles for Population-based Management, 2nd ed., by Lloyd F. Novick (Author), Lloyd F. Novick; Cynthia B. Morrow; Glen P. Mays (Editor), Jones and Bartlett Publishers, 2007. (S)


• The Public Health Accreditation Board website: http://www.phaboard.org/ (S)

• AVMA Directory for AVMA Policy Statements and Guidelines; information on government agencies and their specific branches/offices that utilize veterinarians; and, references to other resources, including specialty groups. (P)

• Websites are also useful resources, especially those of the AVMA, USDA, CDC (including its Public Health Law Program), CSTE, DHS, FDA, HHS, NASPHV, and NACCHO.

CORE COMPETENCIES

1. Describe governmental functions (regulatory/rule-making and enforcement, policies, responsibilities, information/data collection and management) that directly impact public health.

2. Define the major federal agencies and departments with functions and responsibilities that pertain to public health and understand the organizational structure.
3. Describe governmental interactions and relationships (local, state, federal) pertaining to public health, including the relationship, responsibilities, and distinctions between agriculture and public health.

4. Understand the three pillars of public health, the ten essential public health functions, and, the three levels of prevention (primary, secondary, tertiary).

5. Describe the skills and education of a multidisciplinary team of public health professionals working at the local level.

6. Describe the major functions and responsibilities of a local public health department.

7. Demonstrate skills in developing and implementing plans.

8. Define the responsibilities and integrated relationships of public health with partners in public health preparedness/bioterrorism preparedness, and the veterinary practitioner in emergency management/public health preparedness.


10. Demonstrate competence regarding the interactions of public health with diverse sectors of the public-at-large, the media, and government officials.

5. EPIDEMIOLOGY & BIOSTATISTICS

Epidemiology is the basic science with tools to support decision making processes in veterinary public health and preventive medicine. It deals with the investigation of diseases, production losses, and health issues in animal and human populations. Essential activities within epidemiology encompass the broad areas of study design, data collection, analysis, and interpretation. Biostatistical methods and techniques are relied upon to objectively determine which factors are associated with specific outcomes.

Preventive medicine professionals and other practitioners dealing with this topic must be able to integrate and synthesize information obtained from epidemiological findings with their knowledge from other basic and clinical sciences to design effective disease control and health maintenance programs. This includes the ability to plan surveillance or research activities and to evaluate the results.

General Epidemiology study objectives include:

- Describe different types of study designs, when they are used, and the advantages and disadvantages of each
• Interpret properties of diagnostic tests
• Calculate common measures of disease occurrence
• Use epidemiologic methods to identify risk factors
• List and describe the steps in an outbreak investigation
• Describe guidelines for evaluating causality in epidemiologic studies
• Describe different routes of disease transmission and sources of infection
• Describe common disease control and prevention strategies
• Explain how bias and confounding influence the results of epidemiologic studies
• Describe methods for prevention and control of confounding
• Interpret epidemiologic literature

Biostatistics -- The ACVPM General Exam will require biostatistical knowledge that is essential for a diplomate to operate within the preventive veterinary medicine fields. Basic biostatistics and the statistics used in epidemiologic studies and investigations will be the foci. General biostatistics books will provide the underlying knowledge required but should be supplemented with an analytic epidemiology text.

General Statistical study objectives include:

• Describe common probability distributions
• Describe data using measures of central tendency and dispersion
• Name common statistical tests for different data types and study designs
• Interpret results of statistical hypothesis tests
• Interpret regression coefficients and confidence intervals
• Differentiate between the two types of hypothesis testing errors
• Describe the elements involved in sample size estimation
• Determine appropriate statistical methods for epidemiologic studies
• Interpret common multivariable statistical models used in epidemiologic research

Epidemiology Reference Materials

Primary


Secondary

General Biostatistics References