

Tips and tricks for exam preparation: A list from the ad hoc committee for exam question review

Dear residents,

During the process of evaluating our exam questions and the system to make questions two young members of the ad hoc committee described how they prepared for the exam. That was a spontaneous action first, which was done after reading the questions because not all the problems are due to the questions. Then it occurred to us that the personal tips and experiences of the members of our committee might be extremely helpful to the next generations of candidates. The following is a collection of ideas and experiences from supervisors, as well as from diplomats who passed the ECVN certifying exam. Everyone put their tips inside this document in their own language style, therefore this document is not all in the same style – but its authentic.

Of course, for everyone different aspects of preparation for the exam are difficult or tricky, and these “tips and tricks” are only recommendations – showing what helped other people during preparation for the exam.

English language

The written questionnaires and the oral exam of the ECVN exam are in English. Depending on the background of the candidate this can be a challenge. If you do not feel comfortable in talking and discussing in English you might benefit from improving your English by implementing English language in your daily life intensively several weeks or even months before. Watching TV (for example news or movies) in English, hearing English radio stations (BBC etc.) reading English novels might help you to get a better “feeling” for the language in general – and makes you more confident. Although it takes often more time to read English textbooks than textbooks in your native language – this enables you to get used to the wording and terms of animal nutrition. Of course, it might be useful to have a look at textbooks of your first language if you need to learn complex topics – but it might help to use these books only as a “back-up” to make sure that you are used to the terms in English.

Time schedule

Of course you prepare for the exam during the whole period of internship and residency period – but nonetheless you will presumably need some extra time to prepare for the exam.

Some people can cope better with the challenge of learning if they do it over a long period in small steps – some feel better if they focus for a short period very intensively on learning.

If you have a high daily workload it might become very tricky to do every day a little preparation/learning; and perhaps you cannot “jump” directly into the learning process (as you need some time to get into the “learning modus”). Perhaps you perform best if you use short periods where you focus on preparation of the exam (e.g. during “vacation” or periods you are not working or during weekends). Please make sure you communicate your plans with your family and friends and of course your boss and your colleagues. You should think about the best time to take a “off-period” for intensive learning – ask yourself if the time directly before exam is the best time to be “off” work and to prepare for the exam? Or is it best to take several “periods” to do some preparation to make sure the new “knowledge” can “settle down”.

Everyone has a different daily time schedule with very productive periods (ups) and less productive periods (downs); make sure you use the most productive time of the day for learning and exam preparation.

Perhaps power napping is an option for you? Some people can learn for hours concentrated – than take a power nap (for ~ 15 minutes) and then start “refreshed” into the next learning period. Just give it a try – but you might need some time to get used to it (so start in advance). If you wake up not in the perfect period of sleep you might feel even more “trashed” (therefore often people use a “key” that is hold in their hands to wake up).

Do not take into account how much time the other colleagues needed who are going to sit the exam or have passed it. This is personal since anybody has his/her own way to study. This comparison with other people can make you to stress out in a not constructive way and may be let you think that you are not prepared for the exam.

Be sure to be relaxed at the exam, as you will perform much better compared to being stressed. Make sure you arrive on time, that you know where the rooms are, so you are well prepared.

The long-term time schedule is very important. Please make sure that your **plan is SMART**:
To make sure your goals are clear and reachable, each one should be:

Specific

Measurable

Achievable

Relevant

Timely

->These kind of letterwords can also help you to memorize things

So make sure that your time schedule is not too optimistic (making sure that you have some “buffer”) but it should be ambitious. And do not forget to “celebrate” yourself if you reached your short-term goals; this helps to maintain motivation. Perhaps a walk with your dog or a piece of chocolate ... 😊; it also might help you to get a clear “structure” in your time schedule; routine is often better than “freestyle”. But don’t be afraid to change your time schedule if you realize that it does not fit into your daily life or it is not optimal for your process of learning and exam preparation.

Think about your own nutrition during exam preparation – make sure you have all relevant nutrients 😊, and do not forget that physical activity is also important to relax. It is very important to take a rest, relax, and spend time with family and friends. It helped me a lot to schedule free-time within my learning period. This also helps in not feeling guilty when not learning and helps acceptance by family and friends, as you also schedule time for them. Physical activity can help to clear your mind, in that case, don’t play any music and try not to think of anything, but just do a proper work-out.

How to learn all the relevant stuff

- **The most important aspect is not HOW LONG you prepare for the exam – but how effective**
 - A general aspect – **most people do not remember new information if they just have read it once – but repeating reading of the whole book if only a small proportion of the topic is “new” is very time consuming and very ineffective (and frustrating)**. Perhaps it might help if you use a notebook (or you use a dictating machine or voice recorder) – you just write down (or record) the aspects that were “new” for you – and you do a repetition of these aspects (in place of repeating all the stuff you already know)
 - the summary that you will do will be really helpful to consult easily and quickly even the morning of the exam :) when you are stressed out and everybody is talking about a different topic!
- Before really starting it helped me to collect all the materials needed to study, books, articles, case reports, and organize everything, so I was able to find whatever I needed in an easy way. Prepare your desk and create/organize a nice spot to study without distractions (see below).
- Then make a good overview of the topics you need to study and first scan the materials you need to study carefully for topics that you already know and topics that are new to you. Then make a priority list of things you need to do first. As stated before, it is really tempting to start with stuff you already know, but try to start with the things you don’t know.
- What really helped me is to make flash cards of the topics. I bought small cards and used one card per topic to, as shortly as possible, summarize the most important information per topic. The flash

cards can be really helpful for rehearsal of the already studied info, without the rehearsal being very time consuming, It also helps for answering the essay questions, as you already will use keywords on your flashcards that are important for the topic.

- Try not to panic/feel frustrated, this will not help you. Try to see the positive, the knowledge you will gain from studying. This really helped me stay calm and do whatever I could do within the studying time given to me. The more you learn the more you get the feeling that you know very little. This is normal, as there is so much to study, so don't worry. Focus on the things you do know and feel confident about. Accept that you will not get to know everything.
- **Do not focus on your "daily work" topics** – for example if you work a lot with horses – than you are for sure well-trained in this species – so you should focus on other species; remember that even if you chose a specific track for the exam (companion animals, farm animals or horses) – there is a general part and different species are of relevance for the exam
- **Keep in mind that exam preparation is (mostly) no real fun – it is time-consuming and sometimes hard; try to make sure you are intrinsically motivated.** If you are able to get into the "flow" – you will like or even love it; try to focus not on the time you "lose" – but on the improvement in knowledge and skills you are reaching by proper preparation; if you have problems getting started – start with a topic that is not too difficult for you (to keep motivated) – use small steps to work on difficult topics !
- **Make sure you are in an environment that allows you proper preparation** – e.g. no mobile phone, no TV, that disturbs you; perhaps you need ear plugs to get focused on your work ? **"Create" a place to work where you can work concentrated** and you feel well; regarding space, noise level... often it is worth taking some time to change place if you are not able to work without disturbances at your "typical" place; perhaps it is easier for your family, friends etc. if you use simple "signs" – for example closed door means "DO NOT DISTURB" – or you go into a park or a public bib ... for some the tree on a horse pasture might be the perfect place for learning; but please make sure that you critically ask yourself "Is this really the place where I can learn most efficiently ? Or is there something that needs to be changed ?" In most (all ?) cases this means that you need to study on your own ! Make sure the people around you accept this !
- **Aim to understand the content – and not just to be able to repeat it in a "parrot-style";** be able to explain "why" ! For many people it is very helpful to write down complex processes in their own word or even **create a scheme or mind map**; but please keep in mind – the aim is to understand the stuff – not to copy whole textbook !
- Try different ways of studying: write it down, say it out loud, try changing to a different study location,...
- **The aim is not to learn all numbers by heart** – and no one expects this from you (as you can look up these values in literature if needed) – but you should have an idea about rough values (e.g. selenium requirements in horses; g, mg, µg per animal and day ?); typical values (e.g. ratio of protein to energy for maintenance, during lactation...) should be learned by heart.
- However, for specific disease conditions you should have an idea about rough values (how low is low protein for a kidney diet for instance)
- Make a big table of comparison: e.g.:
level for maintenance of some nutrients like pt-Ca, P, Se, main vitamins... in a typical diet maybe dividing in groups like cat dog horse pig... and that in carnivorous herbivorous..., that will push you to have a big pictures and to make a comparative physiology approach, and remember also the measure unit of expression like IU, mg, microg.....and different way of expression of the nutrients. You should do that at least for maintenance-growing-pregnancy-lactation and work. It is big work but it is really helpful !!

Do not forget comparative physiology according to the anatomy. There are nice reviews of anatomy like "Comparative Gut Physiology Symposium: Comparative physiology of digestion Furness et al., 2015" but also others where are comparison of the different digestive tract. you should know the different digestive system of the main species where potentially a nutritionist can be involved

- Try to memorize first author and date of the papers you read, this is helpful to later on retrieve the paper where you read this info
- **Try to implement “animal nutrition” into your daily life** – for example think about steps of food producing (e.g. cheese) and the by-products (whey) that are produced in parallel – which nutrients are “separated” for human consumption and which are used into animal nutrition
Look at the feed label!!! Any feed label!! Go to supermarket and take a look a feed label of the stuff they sell (usually they have companion animal food), go to the country shop (usually they have farm animal food)
- **Give lectures to students** (during preparation of courses you will need to check latest news regarding the topic or to deepen your understanding; choose not only topics you have been teaching before), **join courses at your University dealing with relevant topics**
- **Use suitable textbooks – perhaps you need several books to make sure that you can look topics up in another book if it is not clearly written in your “favorite” book.** Some people learn better if the information is given in graphs – some learn better by reading plain text; perhaps other textbooks (not dealing with animal nutrition but with internal medicine, biochemistry, etc.) are useful – just have a look at your bib
 - Make a big list/program about what to study
 - **Make sure you have all the relevant stuff available before you start into the active exam preparation** – it is frustrating (and time consuming) if you need to search for books or paper etc. during the spare time you have for exam preparation; you know months (years ?) in advance that you will apply for the exam – so start early !
 - **Check your bib regarding relevant literature** – if you “complain” in advance that relevant books are missing – some might be bought (some bibs are happy if they get precise tips which books should be bought – but do not expect this to happen in a short-term period); perhaps the Institute you are working at can buy latest issue of the book you need; if you benefit from using text markers when learning – check if buying your own book is an option for you.
 - Perhaps **diplomats who took the exam recently can help/borrow you books or literature they used for exam preparation.**
 - Stay Hungry and stay foolish and stay curious !!: Even if you apply for small animal ask to your self what a pig-cow-chicken eat: this general culture.
 - Be consistent: if you are working with pig do not apply for small animal track: probably you know different feed/management/legislation more based on the farming system; so apply for farm animals.
- **If possible, visit Journal clubs in clinics** if there are topics that are related to nutrition; for example it might be very helpful to join a Journal Club dealing with renal diseases in companion animals (internal medicine); this allows you also to discuss the relevant information and to get deeper insides into clinical practice (this might be a relevant point if you do not have “hands on” routine daily
- **Join Conferences and continuous education courses** (e.g. webinars might be helpful)
- **Check recent changes regarding legislation dealing with animal nutrition. Download the most recent EUROPEAN legislation and go on the website <https://eur-lex.europa.eu/homepage.html>**
- **Analyze your weak points and “gaps”** – if you do not use biochemistry or physiological topics in your daily work – take this into account: Biochemistry is not the boogeyman: all the pathway are connected so try to make a big picture of the main pathway and push yourself to find the reasons for mechanism. Also try to understand where vitamins/minerals are involved.
- Try to explain some biochemistry pathways to people not acquainted with this, for sure they will challenge you and ask you things that require you to get new insights ☺

- **Get used to the calculation used in other countries;** for example it is very useful to know the factor for changing kcal and kJ by heart; get an idea about different energy evaluation systems (digestible energy, metabolizable energy, net energy) The big table of nutrient that you did before will be very helpful. Also, inform yourself about different energy systems used in different countries. This is not so much different when studying dog and cat nutrition, but different countries within the European continent do use different energy systems for farm animal nutrition.
- **Whenever possible, try to take into account comparative aspects** (for example similarities and differences between rumen and hindgut fermentation; similarities and differences regarding ketosis in guinea pig and sheep and cattle)
- **Talk to other candidates how they prepare;** talk about textbooks, about papers ... keep in mind that exchange with other candidates should aim to help, motivate and push forward each other – not doing a “group complain”. Maybe nice also to study with another colleague. With skype is possible to study together. Make a program about what to study ; than during the skype call you can talk each other about what you have studied, ask questions about critical point; it is also a great help in case you had problems and you were not able to study all the parts you had agreed to do independently: your colleague can summarize it for you and the next time you'll be helping him.
Also talk to candidates of other Colleges.
- **Do “mock exams”** – ask your supervisor or diplomats to do a case discussion in English; via Skype or other technological solutions there is no need to do it with a person “on-site” – it is not important which topic you are discussing – but you can train to argue, to go structured through a case ...
- **Have a look at the examples of exam questions at the website** – this can give you an idea about the questions you need to expect; please keep in mind – it is an exam to qualify for the “European Specialist level” – and not an undergraduate student exam
- **Have a look at the information available at the P & P regarding exam** – so you are not surprised about the topics of the questionnaire
- **Visit other Institutes for Animal Nutrition if possible (but last months/weeks before the exam seems not to be the best time..)** – perhaps you like to apply for the externship grant ? This widens your view – and for sure you are able to learn new techniques, make new friends...
- Push yourself: ask your supervisor for the question that she is using for students. Many supervisor do teaching at many level (veterinary medicine, animal science) and do annual written test. Ask them to have the possibility to answer the question and to participate in the oral part of nutrition courses
- Register at content alert of the main journal of our field like Japan, JAVMA BJN.....and other where are published article related to nutrition. They will send to you the alert about new publications so you can read the abstract of the paper related to your field (companion or farm animal)
- If time is running short, try to focus on reading as much manuscript abstracts as possible, do not spend too much time reading the whole articles in this case
- Once that you know the member of the commission of the exam go to check their research and main topic e.g research article and research interest. Maybe their researches and topics are different from yours and you can learn new things.
- Ask to your colleagues to help you on topics where you do have difficult to study: for example if you are working mainly with dog and cat it is natural that you can have difficulty to learn nutrition of species that are really different like herbivores.....ask a colleague to give you a talk “what you should know about horse/non-conventional pet nutrition”
- For the oral exam: case reports are a good training, and this is what is expected at the oral exam; you should be able to give background information, being able to work up a case and know about diagnostics and medical/surgical treatment in general and more in depth knowledge on nutritional

assessment, nutritional recommendation, and monitoring and follow up. Relate to cases that you have managed during your residency and maybe also give remarks on specific aspects on the presented case. Show that you have in depth knowledge on path-physiology and the way nutrients can help/intervene. Also refer to the existing literature.

- Always try to tackle a case in the same way. This way, no matter what case is presented to you, you know how to start and work through it. This will bring you confidence: no matter how difficult the case, if you work this way you can be sure that you will always get to the right answer. For example: (1) start with patient description, (2) anamnesis, (3) analysis of current diet, (4) define key nutritional factors, (5) etc ...

What to bring the day of the exam:

- o dictionary
- o calculator
- o erasable pencil and rubber
- o pen
- o confidence 😊