

Chloe Fay

Balancing fluid therapy in the cardiac patient | *Chloe Fay*

Fluid therapy in the cardiac patient is notoriously challenging, often this modality is avoided in these patients due to the increase in preload, afterload and decrease in venous return. However, fluid therapy may be necessary in those with concurrent disease processes such as acute renal failure, electrolyte disturbances and hypovolaemic shock. Correcting fluid deficits whilst preventing fluid overload in the cardiac patient can be a balancing act, with the type of heart disease also influencing treatment plans. It is important for the veterinary nurse to understand the pathophysiology behind the renin-angiotensin-aldosterone system to better understand the risk posed to cardiac patients in the face of fluid therapy. Whilst veterinary nurses are not responsible for prescribing the fluid therapy, they are often the staff who monitor the responsiveness to treatment. Working through common conditions, the audience will get to grips with balancing fluid therapy in these patients and the key tools to monitor these patients for early signs of deterioration or responsiveness.

In summary, this session will:

- Gain understanding of the cardiac patient's circulation and cardiogenic shock
- Define the pathophysiology of the renin-angiotensin-aldosterone system
- Provide an overview of fluid overload and the risks this carries
- Demonstrate an understanding of fluid therapy calculations
- Provide the skills to monitor patients for fluid overload, including a brief overview of POCUS

Finding the balance to acid-base: solutions and buffers | *Chloe Fay*

Acid-base balance can be a real brain teaser! In this advanced session, there will be a deep dive into the theories behind the numbers to gain a greater understanding of acid base balance in the body, considering the buffer system and how this is physically seen in our patients. Special attention will be paid to the Henderson-Hasselbalch equation and strong ion theory, to assist with the reading of acid-base results. Looking at the extracellular, intracellular and transcellular mechanisms will provide the key to understanding some of the common disease states seen in the ER and how they affect acid-base balance.

In summary, this session will:

- Gain deeper understanding of the Henderson-Hasselbalch equation and strong ion theory
- Provide the ability to assess electrolytes in line with acid-base balance
- Define the mechanisms in which acid-base is changed within disease processes
- Provide the skills to read and interpret acid-base results

Anaesthesia for the high risk patient | *Chloe Fay*

The critical care patient requiring anaesthesia comes with higher morbidity and mortality risks. Preoperative stabilisation can prove difficult in most of these high-risk patients, and often these patients may need to be anaesthetised without being fully stabilised. The ability to predict and address perioperative and post operative risks to these patients is crucial to their survival, with diligent monitoring and guided clinical interventions being the mainstays of the veterinary nurses role. This lecture aims to provide all the skills to feel confident with dealing with all anaesthetics, in particular the higher ASA grades. Discussion of various high-risk procedures/ disease states, including how to identify problems and remedy the situation will be addressed, as well as any preventative measures that can be taken.

In summary, this session will:

- Gain understanding of the drug choices used in high-risk patients
- Provide the ability to make an appropriate anaesthetic plan based on the patient's needs
- Define the ASA grading system
- Demonstrate an understanding of monitoring tools and how to mitigate risks
- Provide the skills to understand common high risk disease states