

Hey guys, I've done three of these tutorials so far and I've come across the issue that lots of students don't know what range of questions they can be asking for the video, and they feel like they're in the dark. Phil suggested I contribute my approach to the video ideas slide to answer these questions.

When choosing the video topic, I tell the students to take a systems approach to the human body. Ask for them to contribute various systems as a discussion and then ask a question about the system they see day-to-day but don't really think about the physiology of. The systems (and example questions I've suggested) are:

- Nervous system
 - Ask the students if they've got family members suffering from dementia (no need for a response). Examples of questions they can ask are "What is the cause of alzheimers?" (Current model is the formation of beta amyloid plaques from APP in brain but at the moment still uncertain) or "Why do people have a tremor in parkinsons?" (Should result from loss of dopaminergic neurons in the Substantia nigra pars compacta which projects to the basal ganglia – probably a bit too farfetched)
 - Ask the students what they know about muscle contraction (They should have had a lecture on this) – a question can be "How do muscles contract" or "how do we control muscle contraction with our brain" (This is largely due to motor cortex firing neurons to level of muscle, activating lower motor neurons and releasing neurotransmitters at the neuromuscular junction) – these topics are at a level where the students probably wouldn't 100% understand but getting this information can be obtained with a textbook
 - "Why does my arm go numb when I sleep on it?"
- Endocrine
 - "Why does my dad need to take metformin with his meals and what happens if he doesn't?" (Type 2 diabetes question)
 - "Why does my mum need to take insulin injections throughout the day?" (Type 1 diabetes)
- Respiratory
 - Ask for a basic respiratory disease – they'll probably say "Asthma!" and then ask them "How does an asthma puffer work?" (Salbutamol is a beta2 adrenoreceptor agonist which contracts bronchial smooth muscle and opens the airways)
- Gastric
 - "Why do I get hungry?" (Probably a Lectin/Gastrin based pathway)
 - "Why do I get fat when I eat cheeseburgers but not lettuce?"
- Circulatory
 - "What happens to my body when I get a myocardial infarction?"
 - "Why do people need to take aspirin after getting a heart attack?"
- Lymphatic/Immune
 - "What happens after I graze my skin after playing soccer?"
 - "What is a cytokine storm? Why is it so bad? Why does it happen at the end of ebola?"
- Musculoskeletal
 - "Why does lifting heavy weights make me swole and huge"
 - "Why do my bones grow when I grow up"
 - "Will being pulled on a stretcher make me taller?"

If we take a systems approach and ask interesting and weird questions, we get interesting topics to delve into. If the students are unsure as to if the topic is too general/in depth/ need some direction, Professor Philip Poronnik (School of Physiology) will be available for questions at the drop-in session