

Socratic Questioning

What is Socratic Questioning?

A strategy to encourage learners to expand their cognitive process by utilizing methodical questioning. This method allows learners to uncover the reasons behind their thoughts, to assess alternative viewpoints, to acknowledge what they know and what remains unfamiliar, to delve into tricky topics, and to approach thinking in a stepwise manner.

Why use Socratic Questioning?

- Uncovers fundamental topics
- Encourages deeper thinking
- Allows learners to engage in uncertainty
- Inspires learners to conduct their thoughts in a stepwise fashion
- Promotes learners to understand the significance of precision, accuracy, and complexity
- Stimulates learners to support their thoughts with reasoning
- Pushes learners to evaluate the cognitive process— key concepts, rationale, other viewpoints, assumptions, and consequences

Questions that Target the Quality of Reasoning:

Questions that may be utilized in a Socratic dialogue.

Clarity - Can you provide more detail in your explanation or describe the information in a different way?

Accuracy - What evidence is available to support your thinking or rationale?

Precision - Can you provide a more explicit answer?

Relevance - How does that pertain to the issue?

Depth - What aspects make this a complex issue?

Breadth - Are there possible alternatives?

Logic - Do all of these ideas align? Is there conflicting ideas?

Significance - Is this discussion surrounding the main idea?

Fairness - Is this a topic I am particularly concerned about?

Adapted from The Thinker's Guide to the Art of Socratic Questioning (2006) by Richard Paul and Linda Elder. Details may be found at www.criticalthinking.org.

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An Example Socratic Dialogue: What is the mechanism behind RAASi-induced HYPERkalemia?

<p><u>Purpose:</u></p> <ul style="list-style-type: none"> - Is RAASi-induced hyperkalemia a likely scenario a pharmacist might encounter in practice? - What is the pharmacist's role in monitoring for and managing RAASi-induced hyperkalemia? 	<p><u>Information, Reasons, and Evidence:</u></p> <ul style="list-style-type: none"> - Name the five drug classes that fall under RAASi. - Explain the pharmacodynamic mechanism of RAASi-induced hyperkalemia. 	<p><u>Implications and Consequences:</u></p> <ul style="list-style-type: none"> - What might be the consequences if hyperkalemia is left unmonitored/untreated? - Describes the steps you might take to assess and manage RAASi-induced hyperkalemia.
<p><u>Concepts:</u></p> <ul style="list-style-type: none"> - Your description of how MRAs can cause hyperkalemia is clear and accurate. Can you describe how ACEi/ARB/ARNi/direct renin inhibitors can lead to hyperkalemia noting that they do not directly antagonize aldosterone? 	<p><u>Concepts:</u></p> <ul style="list-style-type: none"> - How is antidiuretic hormone (ADH) involved in the RAAS system? - Which organ(s) secrete angiotensinogen, renin, ACE, aldosterone, and ADH? 	<p><u>Inferences:</u></p> <ul style="list-style-type: none"> - When reviewing the serum potassium level lab report, why is it important to check that the sample was not hemolyzed? If the sample was hemolyzed, how might this change your interpretation?
<p><u>Assumptions:</u></p> <ul style="list-style-type: none"> - Your reasoning hinges on the idea that spironolactone is a "K⁺-sparing diuretic." Why have you based your reasoning on that one concept without considering the broader picture including how other RAASi (e.g., ACEi/ARB) have the same possible outcome yet are <u>not considered</u> "K⁺-sparing diuretics?" 	<p><u>Clarification:</u></p> <ul style="list-style-type: none"> - What do you mean when you say aldosterone works by "wasting potassium?" In what way is potassium "wasted?" - Could you give me an example of a patient scenario where you would feel comfortable using an ACEi and an MRA concomitantly? 	<p><u>Interpretation:</u></p> <ul style="list-style-type: none"> - Now that we have worked through all of the components of the central issue at hand, can you clearly and succinctly explain the mechanism behind RAAS-induced HYPERkalemia?

Questions to Reflect Upon

1. Have I made the goal of the discussion clear to my learners? Am I consistently using questions to build and deepen discussion?
2. *What are the roles and responsibilities of pharmacists in this practice for the management of this condition?*
3. *What are the most essential concepts and skills in this subject for student, resident, or experienced pharmacist providers?*
4. *How is my learner thinking about this topic? Where are they getting stuck? How could I make this information more relatable?*
5. *Where can you find overlap between topics?*
6. *How might the understanding of one subject lead to the understanding of another? Is my learner making these connections?*