Clinical reasoning is the essential thought process that underlies how the clinician acts and carries out his interventions and that provides the rationale for his actions (Ajjawi & Higgs, 2008; Edwards, Jones, Carr, Braumach Mayer and Jenses, 2004; Higgs & Jones, 2000; Higgs, Jones, Loftus and Christensen, 2008).

Clinical reasoning requires the clinician to use his knowledge, cognition and metacognition to make informed decisions and to resolve problems in a clinical practice context (Alsop & Ryan, 1996; Higgs & coll., 2008).

Knowledge is all of the facts, information, concepts, and principles that are acquired through learning.

Cognition is a process that allows for the interpretation of data, for making connections between ideas and for putting those ideas together to make a decision or achieve a goal.

Metacognition is the ability to reflect on the thought process. It involves reviewing the connections made and the interpretation of those connections. The person must then identify inconsistencies between the clinical data obtained and the various models or clinical processes with which he is familiar, as well as the expectations based on previous knowledge.

What happens when we do not use reasoning?

Without clinical reasoning, the student is someone who...

- Follows recipes: always does the same thing without necessarily reflecting on its relevance. It amounts to following a recipe that you know by heart.
- Is dependent on others: because he cannot solve more complex situations on his own!
- Does not have a global approach to his interventions. For example, he does not make the connection between an injury and a loss of function.
- Always applies the same treatments or applies different treatments without a rationale for his choices.
- Asks very few questions or asks endless questions because he does not know enough to act.
- Makes mistakes, because he does not take all of the elements into account.
Clinical reasoning is an automatic process among professionals but it must be developed in students. An effective strategy to develop those skills is to ask your student open ended questions. At the beginning of the practicum, it is beneficial to explain to him that he will regularly be asked questions with the view to developing his clinical reasoning and not to find fault with him. Depending on the desired objective, the supervisor must give the student more or less time to answer. By giving the student more time, the supervisor supports him in the process of developing his analytical skills. In contrast, giving him slightly less time accelerates his decision making process.

**Examples of possible questions**

**To recall existing knowledge:**
- In what course did you hear this topic discussed?
- Have you already seen a similar case?

**To develop cognition:**
- What connections can you make with similar cases that you have seen?
- What information that you received from the client is most relevant?

**To develop metacognition**
- Explain to me how you reached that decision?
- Did you have enough clinical data to support your decision?

To see other strategies that may help develop a student’s clinical reasoning, consult the following document: Strategies for developing clinical reasoning.

You can also use the checklist that goes along with this document to evaluate your student’s clinical reasoning: Clinical Reasoning Observation Checklist.

The following sites offer information on the definitions of the basic concepts, various clinical reasoning models, types of reasoning, and several other strategies for developing clinical reasoning: [www.practiceeducation.ca](http://www.practiceeducation.ca) and [www.preceptor.ca](http://www.preceptor.ca).

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