

# Why Am I Getting More Clumsy, Doc? : Instructor Guide

**Title:**

Why Am I Getting More Clumsy, Doc?

**Author:**

Robert B Tallitsch  
Department of Biology  
Augustana College  
Rock Island, IL 61201-2296  
[RobertTallitsch@augustana.edu](mailto:RobertTallitsch@augustana.edu)

Russell Bartt



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**Discipline:**

Biological Sciences

**Target Audience**

Advanced, majors

**Keywords**

Human anatomy, neuroanatomy, neuroscience

**Length of Time/Staging**

Two sessions in class of approximately twenty minutes each, and four to six hours of out-of-class research.



## Abstract

Marshall, a 62-year-old attorney, presented to his family physician with questions as to why he was shuffling a little more when he walked and occasionally slurring his words, especially at the end of a hard day of work. The students are presented with symptoms and test results in a two-part problem and are asked to develop a diagnosis, as well as answer several related questions.

## Date Submitted

7/28/2004

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9/11/2005

## Format of Delivery

The problem is delivered in two parts. Each part will require approximately twenty minutes of class time, and out of class research for the entire problem will approximate four hours.

## Student Learning Objectives

This problem was written with the following summative objectives in mind:

1. Development of a 3-dimensional understanding of the cerebellum and spinocerebellar tracts.
2. Development of how a disruption in signal transmission and processing in the cerebellum affects neurological functioning in an individual.
3. Development of a 3-dimensional understanding of the anatomy of the spinocerebellar system.

This problem was written with the following formative objectives in mind:

1. Increase overall problem solving skills, including the ability to define problems, gather and evaluate information, and develop solutions.
2. Develop effective knowledge acquisition skills.
3. Develop better team skills.
4. Increase communication skills.
5. Increase self-assessment skills.
6. Increase ability to assess the work of others.
7. Increase ability to identify, find and use appropriate resources.

## Student Resources

*McGraw Hill Encyclopedia of Science & Technology* REF Q 121 .M3 2002

Various Medical Dictionaries found at REF R 121

*Gray's Anatomy* REF QM 23.2 .G73 1995

*Professional Guide to Signs and Symptoms* REF RC 69 .P77 2001



*Atlas of Human Anatomy* REF QM 25 .N46 1997

*The Merck Manual* REF RC 55 .M4 1999

*Magill's Medical Guide* REF RC 41 .M34 2002

## **Assessment Strategies**

This problem has been utilized in Human Anatomy classes with an enrollment ranging from forty to eighty students. Assessment has been both summative and formative.

### ***Summative Assessment:***

Summative assessment has been broken down into two formats. One format involves evaluation of both the group and individuals within the group. The following procedure is followed in evaluating individual and group progress on the PBL:

On the day the PBL is assigned the class will break up into PBL groups and do some preliminary work on the problem. By the next class session each PBL group member must turn in an individual hard-copy preliminary report. The preliminary report must contain the following:

- Possible hypothesis of what is wrong with the patient.
- What you will need to find out in order to prove or disprove your preliminary hypothesis, and where you will look to find this information.
- Any terminology that is not understood must be listed and defined, and the source of the definition cited.
- It is expected that each member of the group will review all of the group's preliminary hypotheses prior to coming to class the day the preliminary reports are due.

On the day the preliminary report is due the second part of the problem will be handed out. The class will again break into PBL groups and do further preliminary work on the problem. In this session the group will now:

- Determine how the additional information has changed any or all of the preliminary hypotheses, and why.
- Determine the course of action the group will take in order to solve the problem.
- Divide up the work that needs to be completed in order to solve the problem. The group leader will then post, in the group's Public Folder, a listing of what task is to be accomplished by what group member.

At the next class session (after distribution of part 2 of the PBL) each group member will turn in an individual hard-copy secondary preliminary report. (A copy will also be posted in the Public Folder). This secondary report must contain the following:

- Statement as to how your preliminary hypothesis of what is wrong with the patient has changed, and why.
- What you will need to find out in order to prove or disprove your newly formed hypothesis, and where you will look to find this information.
- Any new terminology that is not understood must be listed and defined, and the source of the definition cited.

As published in the course schedule, each group is required to submit a final report at the state of the appropriate class period. (It would be advisable for the group to keep at least one backup copy on computer disc.) The group report is to contain at least the following:

- Hypothesis of the solution to the problem.
- Sound anatomical reasoning to substantiate your hypothesis.
- Citations for any and all sources utilized, including your textbook.
- PBL reports will be graded on the anatomical accuracy of the final solution to the problem, as well as the anatomical logic utilized to arrive at the final solution.

A second form of summative evaluation is inclusion of material covered in the PBL on a "standard" lecture examination. The anatomical objectives may be assessed in the form of objective or essay questions.

***Formative Assessment:***

Formative assessment is accomplished two times during the course: at midterm and at the end of the course. Students are asked to fill out a form that assesses team and individual performance twice during the term. Individual growth throughout the term is assessed only at the end of the term.

**Solution Notes**

Solution removed.