

What Is Wrong with My Child, Doc?: Problem Handouts



This work by Robert Tallitsch is licensed under a [Creative Commons Attribution-NonCommercial 4.0 International License](https://creativecommons.org/licenses/by-nc/4.0/).

As an open educational resource, feel free to modify and distribute this work under the conditions stated by the Creative Commons license. Originally developed as a part of the [PBL Clearinghouse](https://pblclearinghouse.org/) at the University of Delaware.



What Is Wrong with My Child, Doc?

Part 1

Tommy, a robust 7-year-old second grader is brought to the Emergency Room after experiencing a seizure on the playground during morning recess.

Patient History:

- Tommy was apparently walking out of his school onto the playground in the company of his second grade teacher at the onset of the seizure. The seizure was not in response to any physical trauma.
- The patient has never demonstrated any form of seizure in his lifetime. Mother and father, upon questioning, do not remember any instances of Tommy "blacking out", even for a second or two. He has an unremarkable neurological history, no history of developmental delay and is at the top of his class in school.

Physical Examination:

- Physical exam confirms the lack of any evidence of physical trauma. No bruises or bumps are evident upon physical examination.
- ECG: normal
- CBC: normal
- HEENT examination: normal
- Lungs: normal
- Cardiovascular examination: normal
- Abdomen: normal
- Genitourinary examination: normal
- Musculoskeletal examination: normal
- Skin/Integument: normal, with no evidence of neurocutaneous syndromes.

Tommy is admitted to the hospital for observation and a neurological work-up. The following are the neurological findings:

- No additional seizures were observed in the patient during his 72 hours in the hospital.
- MRI is normal
- EEG
 - Awake EEG demonstrates a normal background with minimal focal or generalized slowing. Intermittent focal discharges were observed in the temporal and parietal lobes.
 - Sleep EEG demonstrated the appearance of more generalized paroxysmal abnormalities. Drowsiness or early sleep produced an increase in frequency and generalization of the discharges. Maximal activation of the EEG abnormalities occurred initially in stages 1 and 2 or non-REM sleep, but did not maximize until stages 3 and 4 of REM sleep.

Tommy was put on a regimen of anticonvulsant medication in an effort to stabilize the EEG findings. He was scheduled for a follow-up neurological consult in the next 30-90 days. He was



scheduled for a 2-week follow-up appointment with his primary care physician, and a follow-up with the neurologist in three months.



What Is Wrong with My Child, Doc?

Part 2

Tommy was readmitted to the hospital within 4 weeks of his initial neurological work-up by his parents. No new seizures had been observed. However, Tommy's language skills had demonstrated marked deterioration within the past 7-10 days. In addition, Tommy had started to demonstrate behavioral and neuropsychological problems. Tommy's parents, as well as his school counselor, described him as aggressive, hyperactive and with a decreased attention span. Indeed, Tommy's school counselor stated in his I.E.P. (individualized educational plan) as "demonstrating autistic characteristics within the last 10 days".

A second neurological work-up was conducted, with the following results:

- Reading and writing skills were preserved
- Tommy demonstrated a significant loss in the ability to recognize familiar sounds. However, alert responses to sound and tonal audiograms were normal.
- Tommy demonstrated a reduced capability to localize sounds.
- In the intervening time since his first consult Tommy's language skills have deteriorated significantly.
- An MRI was repeated, and like the initial MRI, all results were normal.
- EEG results were clinically identical to those seen at the initial consult.
- A fluoro-deoxyglucose positron emission tomography (FDG-PET) test revealed decreased metabolism in the left temporal lobe. Hypometabolism was especially prominent in the middle temporal gyrus of the left temporal lobe.

Utilizing sound anatomical logic, consider the following questions:

1. What is your diagnosis for this patient?
2. What were the key symptoms that lead you to this diagnosis?
3. Give a detailed explanation of the part or parts of the brain involved, and how this/these location(s) participate together in normal speech patterns.
4. Explain how Tommy's diagnosis causes an alteration, if any, in the process you outlined in question #3 above. If his diagnosis does not tie in with #3, then outline how the affected portion of the brain and processes involved would function in a neurologically normal individual, and then compare and contrast them to Tommy's current condition.

What Is Wrong with My Child, Doc?

Team and Self Assessment Form

Your name: _____

Please use the rating scale below to describe how you and your team members performed on each of the tasks listed associated with your PBL group's activities. The purpose of the grading is not to divide groups but to reward those making above average effort and to encourage those not giving their fair share to the group overall effort.

5 if Always 4 if Very Often 3 if Sometimes 2 if Rarely 1 if Never

PBL Group Number: _____

Please fill in PBL Group Members' *Last* Names (including your own)

Names _____ _____ _____ _____ _____

Completed assigned tasks _____ _____ _____ _____ _____

Contributed valuable
information to the group _____ _____ _____ _____ _____

Attended group meetings _____ _____ _____ _____ _____

Was honest in reporting
progress about his/her
assigned tasks _____ _____ _____ _____ _____

Participated in writing
final report _____ _____ _____ _____ _____



Now, ***please circle*** the rating below that you feel you would best describe your group's overall performance:

Very good

Good

Barely Acceptable

Poor

Very Poor



Will I Ever Be Able to Run Again, Doc?

PBL Self Evaluation Form

This evaluation form will not be utilized in assigning any grades. However, it is beneficial to reflect on any progress that you might have made in various areas as a result of participating in a PBL course. Therefore, please evaluate yourself utilizing the following scale.

Scale:

5 = Strongly agree

4 = Agree

3 = Neutral

2 = Disagree

1 = Strongly disagree

Your name: _____

As a result of my participation in PBL in Human Anatomy I feel that I have improved in the areas of:

1. Effective group participation _____

2. Effective group communication _____

3. Evaluation of myself (self evaluation) _____

4. Evaluation of others (peer evaluation) _____

5. Acquiring information to solve complex problems _____

6. Evaluation of the quality of information needed
to solve complex problems _____

7. Working effectively with others _____



8. Higher-order, critical thinking skills _____

Overall improvement rating of yourself: _____

5 = excellent; 4 = good; 3 = average; 2 = needs work; 1 = poor

