

Drug concentration

<http://www.fisme.science.uu.nl/toepassingen/22038>



A doctor presents the following details about the use of a specific drug:

- An average of 25% of the drug leaves your body by secretion during a day.
- The drug is effective after a certain level is reached.
- Therefore it takes a few days before the drug that you take every day is effective.
- Do not skip a day.
- It can be unwise to compensate a day when you forgot the drug with a double dose the next day.

N.B. These details are a simplification of reality.

Investigation

- Use calculations to investigate how the level of the drug changes when someone starts taking the drug in a daily dose of 1500 mg with for instance three times 500 mg.
- Are the consequences of skipping a day and/or of taking a double dose really so dramatic?
- Can each drug level be reached? Explain your answer.

Product

Design a flyer for patients with answers to the above questions. Include graphs and/or tables to illustrate the progress of the drug level over several days.

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Original idea of this task: Mascil Team The Netherlands



Source



Mathematics and Science for Life

www.mascil-project.eu

Dutch project 'Profi ', 'discrete analyse' (1997). Vervolgopdracht is verwerkt in pakketje DDM (1998, 2e experimentele versie):

<http://www.fisme.science.uu.nl/toepassingen/00669/>

Also published in: Wageningse methode VWO4, deel 2 (p. 23, versie 2000)

Dutch version (medicijnspiegel):

<http://www.fisme.science.uu.nl/toepassingen/28001/>

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