

Objective: After alcohol, opium is most likely the second substance that humans have been using for the longest time for its psychoactive effects: for example, morphine has the ability to decrease pain sensitivity even at small doses. The prolonged use of these substances with analgesic-narcotic action (of natural and synthetic origin), both for medical and pleasure use, causes addiction/dependence and thus is regulated by specific laws.

In Italy, in order to maximize toxicological controls, employees of public administration or private companies are subjected to constant toxicological analyses. When a worker tests positive for a certain illicit substance, they are temporarily relieved of the assignment, destined for therapeutic paths at drug addiction medical services and, in extreme, fired.

The present work wants to focus the attention on an increasingly growing and widespread problem, concerning the positivity of subjects for opiate substances, especially morphine, not as the result of illicit use/abuse but due to an involuntary intake via food, such as ingesting poppy seeds.

For this purpose, the study first describes a real case of a worker positivity for morphine related to ingestion of bread with poppy seeds that, subsequently, gave the basis for a university research program.

Materials and Methods: During the research breads with poppy seeds were consumed by twenty-two healthy subjects of both sexes (eight women and fourteen men), having different physical characteristics and lifestyles and aged between 25-73 years old. Their urine samples were tested with the classical GC/MS methods searching for opiates. Poppy seeds, manually shredded, were also subjected to toxicological analysis in order to verify the presence or the absence of opiates.

Results and Conclusion: The results obtained confirmed that the positivity of the subjects to morphine was not due to an abuse of the substance itself (or heroin), but from food contamination.

Keywords: bread with poppy seeds; morphine; GC-MS; food contamination; job placement and social life.

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Article History:

Date of Submission: Tuesday November 1, 2022

Date of Revision: Saturday November 13, 2022

Date of Acceptance: Saturday November 20, 2022

Date of Publication: Sunday January 15, 2023

Digital Object Identifier [DOI]: <https://doi.org/10.5281/zenodo.7536800>

Available Online: Thursday January 26, 2023

Website Archive: <https://www.ijmj.net/archive/2023/1/1/IJMJ-2023-11.pdf>

Citation: Mattia Sicilia, Michela Maria Guarino, Elisabetta Moroni, & Vincenzo Agostini. (2023). Job and social problems due to morphine positivity: abuse or food contamination?. International journal of medical justice, 1(1), 3-22. <https://doi.org/10.5281/zenodo.7536800>