**Requirements:**

This week we will consider the rise and fall of hormone replacement therapy. As we learned, publications ethics affect not only individual author’s professional standing and funding, but they can also have a very large impact on public health. As an example, we will examine the paper by Adriane Fugh-Berman ***“The Haunting of Medical Journals: how ghostwriting sold HRT”.*** [**https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2935455/**](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2935455/)

An author: Adriane Fugh-Berman is an associate professor in the department of pharmacology and physiology, and in the department of family medicine, at Georgetown University Medical Center. She is also the director of PharmedOut, a research center at Georgetown University Medical Center dedicated to researching the effects of pharmaceutical industry marketing on drug prescriptions (wiki).

Background: Menopause occurs when woman’s ovaries cease to produce female hormone estrogen, which usually happens in the fifth or sixth decade of life. Giving that estrogen is essential for maintenance of almost all the organs in female body, not just reproduction, it is hard to overstate the role of this hormone.

Onset of menopause is commonly accompanied by symptoms that can range from mild to very severe. Menopausal symptoms could last for years and be quite disabling. Therefore, in many cases menopause negatively affects women’s quality of live and ability to function. Since every woman will undergo menopause in her life, the demand for the interventions that can alleviate menopausal symptoms is tremendous.

Unfortunately, in the past none of these interventions provided any significant relief. Hormone replacement therapy (HRT), when “missing” estrogen was formulated in a drug form, brought a new era in treating menopausal symptoms and was greeted with enthusiasm by both clinicians and patients. However, unethical writing and publishing practices contributed to over-selling the treatment which lead to serious harm to many women.

When the connection between HRT and increased morbidity and mortality became apparent, thousands lawsuits followed, drug companies paid off, and unethical practices came to light.

* **Articles to read to write the paper**

**<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2935455/>**

**<https://www.ncbi.nlm.nih.gov/books/NBK279050/>**

* **Assay on HRT paper**

Write a short (1-2 pages single space, 11 pts font) assay on what you learned from the paper by Fught-Berman and supplementary material. Specifically, touch the following points:

a) what kind of health hazards are linked to HRT use?

b) list and explain ethically questionable practices that are described in the paper. Be specific.

c) Growth of majority of breast cancers is stimulated by estrogen. Dissect the approach by which drug companies sent the message minimizing the risk of breast cancer in women on HRT.

**Rubrics**

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|  | **Excellent (7.5-10 pts)** | **Good (5-7.5 pts)** | **Fair (2.5 – 5 pts)** | **Needs improvement (0-2.5 pts)** |
| Formatting | Length and Formatting (font, spacing etc) meets the requirements | Text formatting mainly meets the requirement, but the length deviates | Text formatting and length of the assignment deviate from the requirements | Formatting does not meet the requirements |
| Required elements of the assignment | Thoroughly covers required elements stated in directions and instructions | Includes most of the required elements as stated in the directions/instructions | Missing more than half elements as stated in the directions/instructions | Missing most of the require elements |
| Grammar and syntax | All sentences are in proper English and  grammar | Most sentences are correctly using proper English and grammar; | Some sentences are not using proper English and/or grammar | Most of the writing is not written using proper English or grammar; |
| Comprehension | Demonstrates sophisticated understanding of the topic | Demonstrates an accomplished understanding of the topic | Demonstrates an acceptable understanding of the topic | Does not seem to understand the topic |
| Analysis | Provided through and comprehensive analysis of the topic | Presents mostly through analysis of the topic | Presents superficial analysis of the topic | Does not present analysis of the topic |
| Supporting evidence | Supports all answers and opinions with relevant evidence | Supports most answers and opinions with relevant evidence | Supports some answers and opinions with limited relevant evidence | Minimally supports answers with evidence, or uses irrelevant evidence |
| Research | Supplements case study with extensive research | Supplements the case study with adequate research | Supplements case study with limited research | Little or no research presented |
| Organization and flow | Writing demonstrates a highly sophisticated clear and concise style, is focused and well-organized | Writing demonstrates mostly clear and sophisticated style, and is organized | writing demonstrates style that is not clear and/or not concise and is slightly disorganized | Writing is unclear and very disorganized |
| Content accuracy | All content is accurate, there is no factual errors | Most of the content is accurate, but there is one piece of information that may be inaccurate | The content is generally accurate, but one piece of information is clearly flawed or inaccurate | Content is confusing throughout and contains several factual errors |
| Citations and References | Bibliography is properly formatted and complete | Bibliography is complete but not properly formatted | Bibliography is incomplete and is not properly formatted | Bibliography is not listed |