



# Effects of Oral Hormonal Contraception on Elite Female Swimmers



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## INTRODUCTION

I noticed a drop in performance after starting oral contraceptive pills (OCPs) and I thought they might be negatively correlated. Despite the widespread use of OCPs among young women, including elite athletes, there is little research on how these hormones affect sports performance. This lack of data poses risks for young female athletes. The aim of this study is to gather a personal account from an elite swimmer to support further scientific investigation into the effects of OCPs on athletic performance.

## RESEARCH METHODOLOGIES

The research combined correlational and case-study methods, focusing on the author's swim performance before, during, and after taking oral contraceptives. Using Swimcloud, the author collected quantitative data from three freestyle events across two pool types (SCY and LCM) between March 2022 and July 2023, creating performance graphs. Anecdotal observations from this period supplement the data. The analysis uses correlation, regression, and descriptive statistics to explore the potential impact of birth control on athletic performance in a high-level swimmer.

## CONCLUSIONS AND ANALYSIS

### 1. Quantitative Conclusions

- It was found that oral contraceptive pills hurt performance
- In the winter months of 2022, I was slower than the spring months of 2022
- I was also slower than the spring months of 2023
- Consistent results across all events and courses

### 2. Qualitative Conclusions

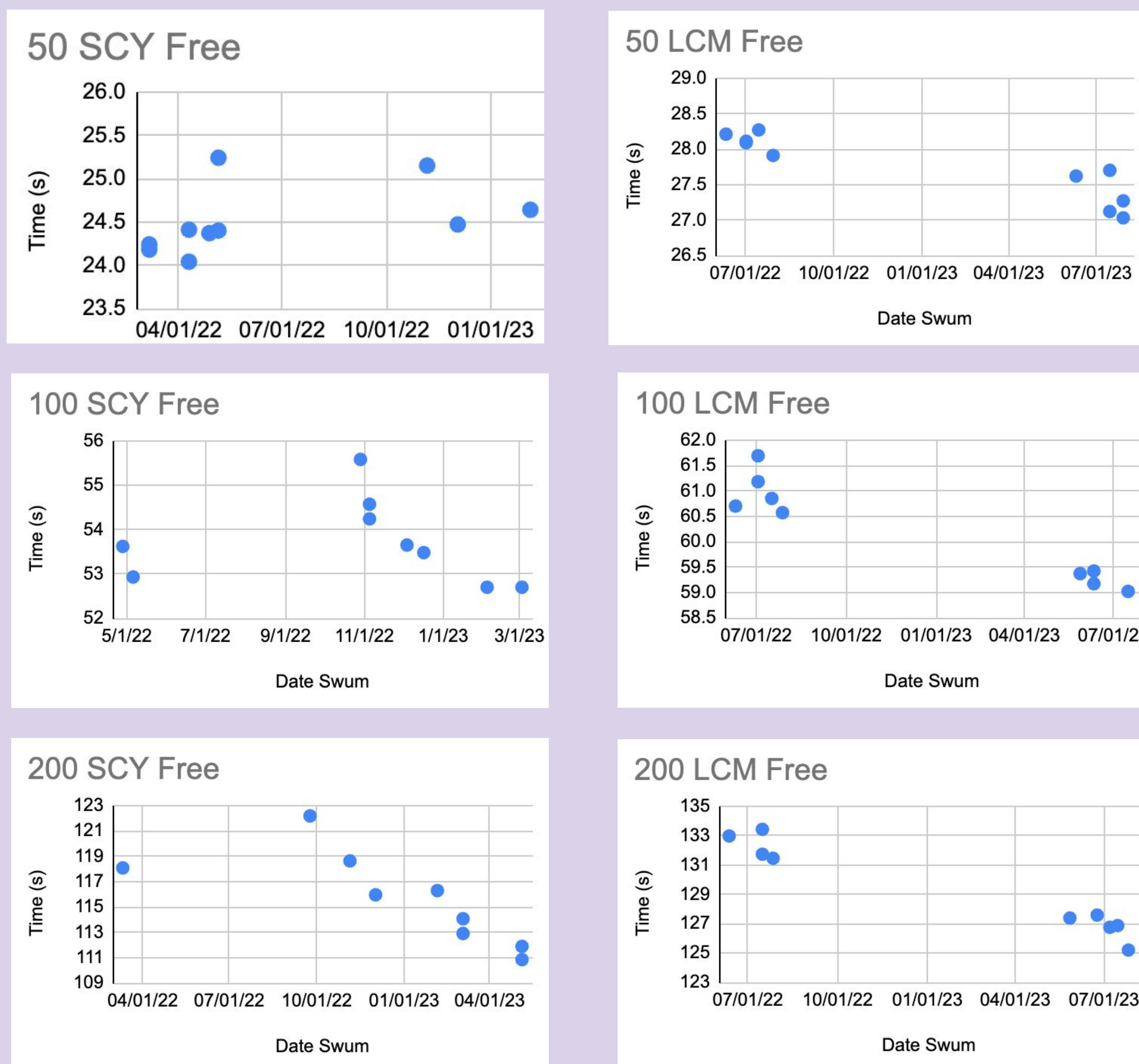
- It was found that oral contraceptive pills hurt performance
- Similar symptoms to those mentioned in literature review
- I felt heavier and weaker in the water
- My mood and motivation toward the sport changed and decreased

### 3. Analysis

- Upon ending hormonal contraceptives, my times improved significantly
- My mood also improved and my body felt better and stronger
- I actually enjoyed swimming again

## DATA AND FINDINGS

The figures below display swim times from March 2022 to July 2023 across two pool types: SCY (short course yards, 25 yards) and LCM (long course meters, 50 meters). SCY times are faster due to the shorter pool length. Gaps in the data represent seasonal transitions between pool types—LCM in summer and SCY in fall through spring—rather than a lack of competition.



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## IMPLICATIONS AND NEXT STEPS

The findings seem to show a negative correlation between the performance and experience of a swimmer and the use of oral hormonal contraception. My research highlighted the experience of one athlete, using both quantitative and qualitative data. It supports the same conclusions as the anecdotal evidence did in the literature review; many female athletes who used OCPs experienced similar symptoms and results as I did. In terms of quantitative results, our bodies felt heavier, moods worsened, and motivation decreased. In terms of performance, mine consistently got worse during the months on OCPs, and the anecdotal evidence from the literature review shows that other women experienced the same.

Most of the research done and the knowledge that is out there is mainly anecdotal evidence. No facts and very little quantifiable data exist on the possible relationship between OCPs and performance. However, some anecdotal evidence out there suggests a negative correlation between the two. Namely, if an elite athlete takes birth control, it could negatively affect their performance, and my research supports this hypothesis. It's important to keep in mind, however, that this is only one case study of a singular athlete, and although my findings were congruent with anecdotal evidence out there, many other athletes have had positive experiences with OCPs.

My research is just one more piece of anecdotal evidence that must not be ignored. My research is supported by both qualitative and quantitative data and researchers should use it and the other anecdotal evidence and previous studies available to jumpstart their own projects. An in-depth, longitudinal, conclusive study is needed to make any concrete claims about the possible relationship between OCPs and the performance of elite athletes.