The Connection Between Emotional Stress and Developing Graves' Disease

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The Connection Between Emotional Stress and Developing Graves’ Disease

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Background Information

- The thyroid is mainly in charge of the body’s metabolism and energy.
- Autoimmune thyroid diseases, affect up to about 1% to 5% of the population.
- It causes the immune system to attack the thyroid and cause it to create antibodies that produce too much thyroid hormones.

Potential Pitfalls

- The participants need to keep a consistently high score on the Holmes-Rahe Life Stress Assessment each month before getting blood drawn.
- A participant who actually has hypothyroidism will skew the data results, showing below normal results and T₃ and T₄.
- If their score were to suddenly decrease because the stressors in their life have gotten better, then that will definitely impact the data.
- The thyroid hormone levels found from the bloodwork will all be higher than normal range found in the control group.
- What about the TSIs?? Possibility some of the participants just have hyperthyroidism and not have the antibodies present in their bloodwork throughout the full year of the experiment.
- Maybe some will not show any antibodies until halfway through the study and by chance, some participants will have the antibodies present right away at the beginning.

Specific Aim

This study aims to identify the effects of long-term emotional stress on the development of Graves’ disease. More specifically, looking to see if this type of stress triggers the overabundance of thyroid-stimulating immunoglobins (TSIs), the antibodies that attack the thyroid, causing growth and the production of too much thyroid hormone.

Methods

Participants

Data analysis

Holmes-Rahe Life Stress Assessment

Repeat for 11 months

Measure thyroid hormone levels and TSIs

Potential Conclusions

- The thyroid hormone levels found from the bloodwork will all be higher than normal range found in the control group.
- What about the TSIs?? Possibility some of the participants just have hyperthyroidism and not have the antibodies present in their bloodwork throughout the full year of the experiment.
- Maybe some will not show any antibodies until halfway through the study and by chance, some participants will have the antibodies present right away at the beginning.

Literature Cited