

Dear players,

Congratulations! You have made it through the tenuous migration journey, escaping through war, gang violence, and poverty to start a new life in the U.S. with your family. Some of you have gotten here through the current legal system, waiting for decades to apply for citizenship to come here, while some of you have made it through the dangerous trek through Latin America to reach the borders of the U.S. Some of you too have been resettled by the government as refugees to escape dictatorial or communist regimes, while some of you are foreign workers with temporary protected status whose homes are undergoing environmental or political tumult that prevents you from returning home.

These are the “migration journeys” that have brought you to the U.S., and as incredible as it is to have survived such feats, you will notice that some of your peers were not so lucky. Even among those of you who have survived, there are still huge disparities in cortisol levels, which are representative of the large discrepancies in health outcomes for different Latino-American migrants of different legal statuses. These legal statuses have not only affected your “migration” journey, but also, even more importantly, your “acculturation” journey.

Acculturation is the process as a minority culture of attempting to integrate into the majority American culture by negotiation of one’s behaviors and practices (APA Contributors). And one of the most significant social determinants of health caused by these legal statuses include “stress,” brought on by a series of factors regarding discrimination, intergenerational conflict, trauma, stereotypes, and laws disproportionately affecting certain groups of Latino-Americans.

Stress is shown through what is called the hypothalamic -pituitary-adrenal (HPA) axis (Kirmayer 2007). As you have seen in the cards, different societal events may cause more chronic psychological stress on migrants of varying legal statuses differently, which causes the hypothalamus to release the hormone CRH. CRH activates the pituitary gland to release ACTH to the adrenal cortex, which responds by releasing “cortisol” into the bloodstream. Cortisol is essential as to how these societal events directly affect the health of Latino-American immigrants who face these specific stressors.

The “stress response” that is created by elevated levels of cortisol is designed for the body to escape from *acute* stressors, which lowers immune system function and digestion, while at the same time increasing heart rate and turning stored glucose into sugar to be absorbed by cells in the bloodstream (Sapolsky 1994). However, for psychological stressors that *chronically* occur among these Latino-American migrants through daily discrimination, epigenetic dysregulation, parental conflict, and lack of an

ability to receive basic needs benefits, the body gradually goes through a “weathering” of its ability to function (Shonkoff 2009). Constant elevated heart rate can increase risk for hypertension, atherosclerosis, and cardiovascular disease, and it was reported that Latino-Americans have a 1.5 higher risk of diabetes, hypertension, and obesity compared to white Americans (Langellier 2012). When sugar continues to be released into the blood, but is not used up due to psychological stressors, blood sugar level may be dysregulated, and cells may lose the ability to intake sugar and insulin properly, also increasing risks for diabetes.

Perceived discrimination based on race, ethnicity, gender, or social-economic status has been shown to be a key indicator of chronic stress related health disparities in racial and ethnic minority groups (Williams). The rise in cortisol levels caused by racism stress can come in multiple forms. In the U.S., racism can be seen through laws and regulations otherwise known as structural racism (Ildefonso). These forms of racism can become microaggressions that overall lead to an increase stress in the groups affected, such as immigrants and people of color. Although the idea of immigrants has changed over the years, the effects of racism have persisted and have led to health disparities (APA Contributors).

Health disparities are also found to be associated with environmental stress which can lead to childhood asthma, hypertension, substance abuse, diabetes, obesity and depressive symptoms (Braveman 2010). Worse health among the most socially disadvantaged in the United States calls for policy reforms that prioritize these oppressed groups. It also reveals the strong influence and negative effects that social stereotypes can have on the lives of several immigrants and people of color. In all, migrants suffer from the chronic stress that is experienced moving to a new country, where some are more disadvantaged than others. Immigrant health is constantly at risk with policies and legal status that can play a big role in leveling the playing field for those with different migration and acculturation experiences. We hope that in playing this game, you have understood better the different societal and structural harms placed upon Latino-Americans of different status and have stronger awareness of the health disparities that are connected to them.

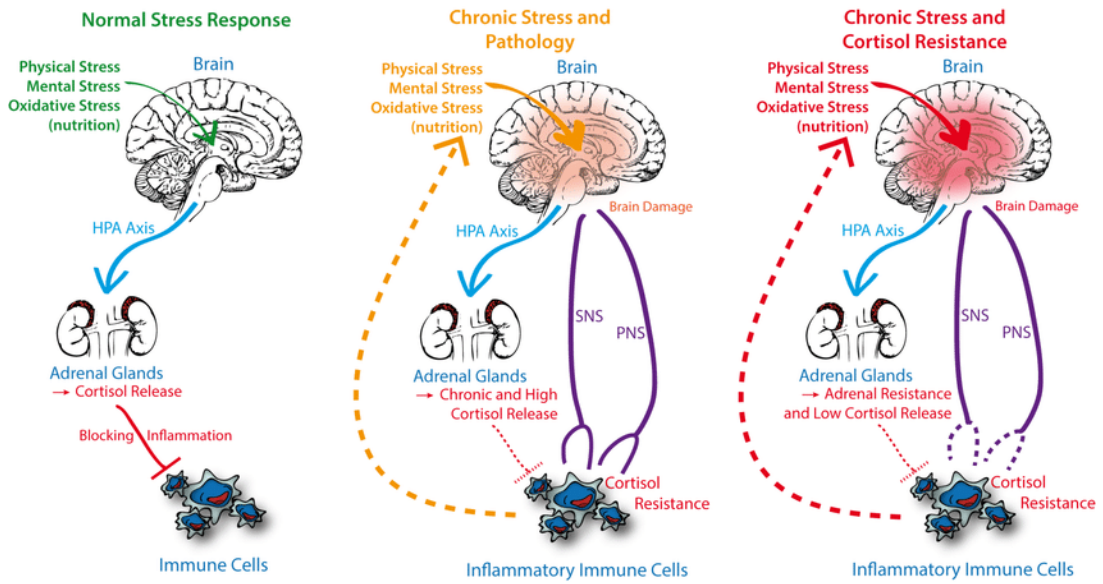
Best,  
Jocelyn, Alex, Manvir, and Joseph

## References for Letters and Images

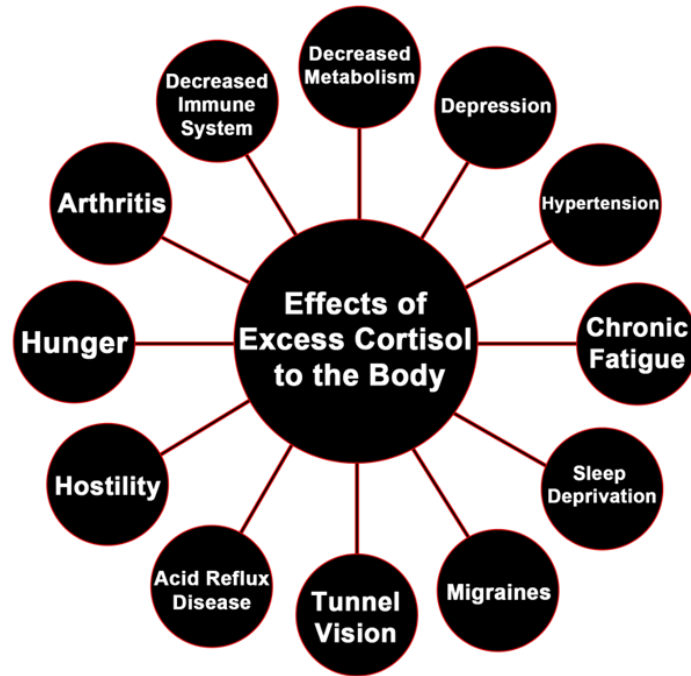
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# Images



(Depression 2020)



## **Cortisol - The Stress Hormone**

(Yazdi 2019)