

Stage 2: Research

Due Beginning of class May 23th

Fill this out for each solution and then put info on poster

What is your problem (at least 2 paragraph)? More detail the better

Our problem is Parkinson's disease which we want to help cure to help people who experience it feel better in a way. Parkinson's disease is a neurodegenerative disorder affecting predominantly dopamine-producing ("dopaminergic") neurons in a specific area of the brain called substantia nigra. Tremor may be experienced with the disease which is tremor, or shaking, usually begins in a limb, often your hand or fingers which a hand may tremor when it's at rest with the disease. The symptoms of Parkinson's disease is lowed movement (bradykinesia), rigid muscles, impaired posture and balance, loss of automatic movements, speech changes, and writing changes. Which other things with the disease that might be experienced as well is blood pressure changes resulting in feeling dizzy or lightheaded when stand due to a sudden drop in blood pressure (orthostatic hypotension); smell dysfunction being problems with sense of smell and difficulty identifying certain odors or the difference between odors; fatigue in which many people with the disease lose energy and experience fatigue, especially later in the day (cause isn't always known); pain with Parkinson's disease that some people experience, either in specific areas of their bodies or throughout their bodies; and sexual dysfunction which some people with Parkinson's disease notice a decrease in sexual desire or performance.

Parkinson's disease is often accompanied by additional problems, which can be treatable which are thinking difficulties (not really responsive to medication); depression and emotional changes; emotional changes (such as fear, anxiety or loss of motivation); swallowing problems which is a development of difficulties with swallowing as your condition progresses (saliva may accumulate in your mouth due to slowed swallowing leading to drooling, chewing and eating problems which affects mouth muscles and can lead to choking and poor nutrition); sleep problems and sleep disorders; rapid eye movement sleep behavior disorder which involves acting out your dreams (medications may help

sleep problems); and bladder problems which includes being unable to control urine or having difficulty urinating, and constipation. Each person depending experiences the disease differently. Possible ways to prevent it although the cause of Parkinson's is unknown, proven ways to prevent the disease also remain a mystery which despite of that research has shown that regular aerobic exercise might reduce the risk of Parkinson's disease and some other research has shown that people who drink caffeine like coffee, tea and cola which leads to getting Parkinson's disease less often than those who don't drink it. However, it is still not known whether coffee actually protects against getting Parkinson's, or is related in some other way. Currently there is not enough evidence to suggest drinking caffeinated beverages to prevent Parkinson's. Green tea is also related to a reduced risk of developing Parkinson's disease.

There is no cure, only some treatment. Parkinson's sometimes causes the death of the holder. A lot of things are still unknown about Parkinson's which is what my team and I are hoping to fix by empowering the people, accelerating trials, and figuring out how to improve care and research for it. Symptoms is also what we hope would all be fixed once it is cure. There is no cure yet and most of the disease with the brain is still unknown. So hopefully just figuring out more its cause could lead to a cure which is what we hope would come soon. Understanding the disease is a big step to finding the cure, especially the cause which will help with a solution.

Current limitations, why has it not been solved already?

It has not been solved because how it's cause is still unknown as well as funding it needing to improve care plus its research along with its need to empower the people and accelerate the trials.

Proposed solution. More detail the better

There are many solutions we propose, 3 mains ones and I'll be talking about improving Parkinson's care and research while Max talks about empowering the people and Izzy will talk about accelerating clinical trials. With improving the care

and research for the disease the scientists working with it might be able to have more resources to solving it possibly or just figuring out what's the cause for it which is still major step. Which is why it is a proposed solution since it could help.

Mentor, why did you choose them, their credentials and contact info.

Kelly Lyons has a Ph.D. and works as the co-chair Director of Research and Education Parkinson's Disease and Movement Disorder Center at University of Kansas Medical Center in Kansas City, KS. Contact is at: 913-588-6989. I choose this person because she is a co-chair in research currently being done on Parkinson's disease.

Citations

<https://parkinson.org/research/Parkinsons-Outcomes-Project/Principal-Investigators-and-Advisors>

<https://parkinson.org/understanding-parkinsons/what-is-parkinsons>

<https://www.ncbi.nlm.nih.gov/pubmed/12666094>

<https://www.nejm.org/doi/full/10.1056/NEJM196810242791711>

<https://www.webmd.com/parkinsons-disease/default.htm>

<https://medlineplus.gov/directories.html>

<https://www.mayoclinic.org/diseases-conditions/parkinsons-disease/symptoms-causes/syc-20376055>