

Necrotizing Fasciitis

New Mexico
Supercomputing Challenge
Final Report
April 4, 2014

Team 94
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Necrotizing Fasciitis is a "flesh eating disease" though it does not have anything to do with flesh and it does not eat you. Streptococcus bacteria can cause this disease, Staphylococcus are select type of vibrio and clostridia bacterial species. These bacteria are "anaerobic" which means they hate oxygen. When they descend beyond the outer layers of the skin they come across a layer called the "Fascia". The fascia is a layer that separates muscle bundles.

The problem of our project is how the bacteria is transmitted and how fast is it to recovery rate is before you get seriously infected.

Our method that we used to solve the problem is first we created our project on a water supply that was contaminated then we created a recovery and infected rate to see how many people have recovered and how many people have been infected. Then we did research on how long it took for someone to get medical help before they get seriously infected.

We verified and validated our project by researching how Necrotizing Fasciitis is transmitted and comparing it to our project.

The results of our project were 3 out of 10 chances to get the Necrotizing Fasciitis. The chances of getting help from a doctor. The faster the rate of waist the faster the faster the rate of the Bactria grows 3 per every 1/5 of the waist.

The conclusions of our project was a 3 out 10 chance to get infected of Necrotizing Fasciitis in an hour and a 1/5 of a chance to get medical attention from a doctor or the doctors office. The bacteria multiplies 14 strips per 60 minutes. The more waste the bacteria eats the faster it multiplies and infests. But, also some time gets destroyed. The bacteria eats all the food it starts to decrease in amount in bacteria. But then we release more and more waste in the water. So I conclude if we could find a way to dispose this waste some different way, we potentially decrease the amount of people that get Necrotizing Fasciitis.

The software that we used for our program was Starlogo.tng
The websites that helped with our research on this disease was: www.medicinenet.com

Our most significant achievement of our project is that we where able to program our Necrotizing Fasciitis program accurately. We didn't expect to have any accurate results or consistent results, but our program would always give us the same results. It shows how the bacteria would multiply in to even more bacteria and how it would "eat" the skin.