Cystic Fibrosis is an inherited chronic disease that primarily affects the lungs and digestive system.

Lungs

A defective gene causes the body to produces thick, sticky mucus. This over time damages the lungs, blocks airways making it hard to breath.

The most common symptoms of CF respiratory are :

* Chronic coughing
* Recurring chest cold
* Wheezing
* Shortness of breath
* Frequent sinus infections
* Allergies that last all year

Symptoms of the lung disease start from infancy and there is all small but progressive loss in lung function with every passing year.

[medical backup for the points made above]

Digestive System

The CF gene obstructs the pancreas and stops the natural enzymes from helping the body break down and absorbing food.

The most common symptoms of CF gastrointestinal disease are :

* Inability to gain weight which can potentially lead to the patient having to take extreme measures such as been tube fed or peg fed
* Diabetes as a result of high blood sugars and some of the medicines over time can lead to a patient contracting diabetes
* Poor growth
* Excessive sweating
* Recurrent inflammation of the pancreas
* Salty skin

Risk Factors

Genes :

CF gene mutations are divided into three classes 1,2,3 are generally more severe causing “Classic CF”, classes 4,5 are usually milder. Also other genes called modifier gene can affect a person's symptoms and outcomes.

Environments & lifestyles :

People with CF and to consume a very large number of calories to maintain weight and grow which can be difficult to achieve. Physical activity is also important to help keep lungs healthy.

Age :

Age plays a large role in a patient's life. There are specific age ranges throughout a patient's life that can have a big or small impact on a patient's quality of life.

What causes CF :

CF is caused by having two abnormal copies of the CF gene. CF cannot be caught or acquired. It can occur in people who have no known family history of the disease, both the father and mother most have the abnormal gene and they have a 1 in 4 chance of having a child with CF. If a couple have a child with CF than the rate changes to a 50/50 chance.

Aim :

The aim of this application is to target a specific CF age range (12 to 18) to monitor the physical activity progress they make through the 3 month period between the patients scheduled doctors appointments.

Why :

The information that could be gathered from the 3 month interval could provide a team of doctors with specific information that could help optimize the patient's treatment plans based off the data recovered.

The food diary would help build an accurate picture of the patient's eating habits over the period and keep track of calories. It would help a dietician build a more complete food plan for the patient.

diagram