Cystic Fibrosis

Cystic fibrosis (CF) is one of the most common genetic diseases. This is an inherited disease, it affects both children and adults. It occurs approximately in one of 3.300 births. The average lifespan for people with this disease is about 30 years. The researches conducted by Cystic Fibrosis Foundation show that there are about 30.000 Americans, 3.000 Canadians, and 20.000 Europeans, who have CF.1 out of 20 Americans is a carrier of the CF gene and 12 million of them do not know about it. A person can be just a carrier without symptoms, but when her/his child is born he is either a carrier or a sick person.About 500 genetic mutations are associated with this disease, most of them are delta F 508, which are the most common for CF mutation. Delta F 508 mutation is in its way associated with a single haplotype “B”.The most common test for CF is so called “sweat test”, when the amount of salt is measured in the sweat. Children with CF have usually more salt in their sweat. The skin is made to sweat with the help of chemical called pilocarpine and with mild electric current. Then the sweat is collected with a filter paper and wrapped in plastic. In 30-40 minutes they put away the plastic and start the analysis of the paper with sweat. Such test is not quite good for the new born children as they do not produce enough sweat. In this case the doctors use another type of test: immunoreactive trypsinogen test. During this test the blood of the new born is taken and is analyzed in 2-3 days. If this test shows positive results it should be confirmed by sweat and other test. There is a special test for example that looks for the CF gene. This test is used as there is some percentage of people with CF, but with normal sweat chloride level. There are other tests with x-rays and with stool examination.There is no certain cliché for the symptoms and sings of CF. All patients are affected in a different way and to a different degree. Cough is always present, it is harder in the morning. The basic problem for all patients is certainly the same – glands. Glands produce sweat and muscus, which is of yellow, green or brown color. The other common symptoms are: salty- tasting skin, wheezing or pneumonia, good appetite, but bad weight gain, bulky stools. The sweat of healthy people makes the body cooler and the mucus prevents the tissues from drying and is necessary for respiratory, digestive and reproductive systems. When people with CF lose a lot of salt while sweating, their balance of minerals in blood is ruined, as a result, appear such symptoms like abnormal heart rhythms and shock. The thick mucus is gathered in lungs, which serves the reason for permanent lung damage, respiratory infections, problems with breathing. Lung damage is usually the cause of death of the patient. During the periods when the symptoms of CF get stronger, the patients lose weight, feel constantly tired, they experience pain in sinus and their lungs make wheezing sounds. Such symptoms could be even mixed up with those of pneumonia or heart failure. Later the chest of the patients looks like barrel and clubbing appears on fingers and toenails. If a person with CF is taken to a hospital, the doctors usually have to treat respiratory, gastrointestinal and nutritional problems. Some people may even have liver disease, diabetes, inflammation of the pancreas and gallstones.The children of the parents, who are sick themselves or are just the carriers of the CF genes are susceptible to this disease. One person can not actually catch the disease from another. It is not a kind of infection either. A child is already born with CF and can not pass it to other people, except for his own children in future. There are some cases when a child is too small and doctors can not state that he/she has CF. Besides sometimes the sick children do not look sick at once, the symptoms are simply developing, and thus it may not always be obvious for the doctors. But all children who are sick have this CF gene inside. It is known that all people are different and this is thanks to the cells containing DNA. The groups of genes build into DNA inside cells. Children usually take after their parents in appearance (like for example the color of the eyes or of the hair, the figure and so on) as they inherit their genes. Certain changes in the genes’ structure cause such illnesses like CF. It is not necessary for one of the parents to have CF, but the child will be sick if he gets the CF gene. If both parents have CF genes, there is one in four chances that the child will inherit the disease. Even if he doesn’t he will also be the carrier of the CF gene. As this is a genetic disease it is likely for a person to have this gene if there were such cases in his family already.As it was already mentioned above the CF affects first of all lungs. People with CF have slipper mucus in their lungs which causes traps for bacteria. This mucus usually gets away from the body by very small structures called “cilia”. In people, who have CF the mucus is so thick and sticky that it is almost impossible to get it away and thus the blockages are built. Besides the bacteria, trapped by mucus can not get out either and this creates the ground for infections. The release of toxic oxygen species and proteolytic enzymes from inflammatory cells is the main therapeutic concern. An important organ in human body is pancreas, as it makes a lot of proteins: hormones and enzymes. CF affects the pancreas also, as it doesn’t allow the delivery of enzymes and as a result the patient has problems with food digestion, he can not gain weight. Children may have bowel movements (poop). The mutation Ni 303 K was classified as a severe mutation with respect to the pancreas, it accounts for only 1.5 % of the CF chromosomes. Not all patients with CF experience steatorrhea, but still other forms of dysfunction may be present.Nowadays there’s actually no cure for this disease. Within last 30 years the developments were certainly conducted and the treatment of CF has improved greatly and many patients manage to survive till their 30s – 40s. As this is a genetic disease the only way to cure it is to use the gene therapy at an early age. It would be great if it were possible to replace the defective gene or repair it. A person could also be given the missing protein products. Currently some drug- based approaches are worked out, at least to ease the symptoms of the disease and slow the progress of it. There’s special antibiotic therapy for clearing the lungs from the mucus. The treatment focuses usually on the lungs problems and breathing obstacles, which are the reasons of lung infections. Physical therapy, exercises, certain devices and medicines are used for treating CF. The so called “flutter” is a device, that looks like a pipe. It is supposed to help the patient to make the airways free from mucus with the help of special valve, which gives rapid air pressure fluctuations in the airways.Pseudomonas bacteria usually cause the lung infections. Earlier they were treated with huge doses of antibiotics that were not available in oral form. It certainly influenced negatively the functions of kidney. These infections were reduced by aerosol form of tobramycin. Such form is much better than intravenous injections. Some researches demonstrate that there are links between regular exercises and weigh gain and lung functions of the people with CF. Exercises also help with airway clearance, but it should be done before exercises in gym or in the pool, and people with CF should drink a lot of water in order to avoid dehydration. Sometimes doctors suggest taking salt replacing tablets.

About the Author

This herb is used to aid digestion, relieve stress and stimulate the appetite. Is used to aid in digestion and to combat.

Source: http://www.productsherbal.com