

***Human Biology ATAR – Task 3: Extended Response***

***Lung diseases and treatments (7.5%)***

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| --- | --- | --- | --- |
| Name: Kendrick Thein | | | |
| Time allowed: 1 Lessons | | | |
| **Section** | Your Mark | Marks available | Percentage |
| **Section 1:**  Report |  | 10 | 18.5% |
| **Section 2**:  Validation Test |  | 44 | 81.5% |
|  |  | **54** | **100%** |

**Declaration of Authenticity**

I (Student Name) declare that this work is my own and I have not plagiarised from any source.

Signature:  
  
Date:

**Lung disease and treatments**

You are to choose **one** lung disease from List A and **one** disease from List B to research and find information about the named aspects of each disease. You will then complete an in-class validation assessment on your research without notes.

DISEASES

|  |  |
| --- | --- |
| **LIST A** | **LIST B** |
| Chronic bronchitis | Pneumonia |
| Emphysema | Pleurisy |
| Cystic fibrosis | Tuberculosis |

Check list

* Cause, or main causes
* Symptoms and diagnosis
* Current treatments…how they work and what they do
* Prevention

Print the names of the diseases you have chosen here:

Disease A Cystic fibrosis

Disease B Tuberculosis

**Marks Table**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Report** | **Cause** | **Symptoms** | **Treatments** | **Prevention** | **Marks** | Your mark |
| **Disease A** | 1 | 1 | 1 | 1 | 5 |  |
| **Disease B** | 1 | 1 | 1 | 1 | 5 |  |

This sheet is to be the cover page of your report

**Lung disease and treatments**

Disease A: **Cystic Fibrosis**

**Causes:** It can be caused by mutations. The cystic fibrosis transmembrane conductance regulator (CF) gene alterations that lead to the hereditary disease cystic fibrosis. The CF gene gives the CF protein instructions. The condition known as CF runs in families. It is brought on by a gene abnormality that causes the body to create mucus, an unusually thick and clingy fluid. The pancreas and the lungs' breathing tubes both become clogged with this mucus.

**Symptoms and diagnosis:** Symptoms of Cystic Fibrosis is frequent lung infections, such as bronchitis or pneumonia. breathing difficulties like wheezing and diarrhoea. Despite having a good appetite, you do not grow or acquire weight well. often having oily, large stools or having bowel movements that are difficult. Diagnosis of Cystic Fibrosis is a sweat test looks for significant chloride levels in your sweat. The gold standard for diagnosing cystic fibrosis is the sweat test. It may be used to confirm a positive diagnosis from a screening of your newborn baby or if you have symptoms that could point to cystic fibrosis.

**Treatments:**

* medicines for the treatment and prevention of chest infections.
* medications that thin and facilitate coughing up lung mucus.
* drugs to open the airways and lower inflammation.
* specialised methods and tools to assist in clearing mucus from the lungs.
* medications that enhance meal absorption.

**Preventions:** Since CF is a hereditary disorder, early-onset gene therapy is an option to prevent or treat it. Gene therapy would ideally be able to fix or replace the damaged gene. Antibiotics are used to both prevent and cure chest infections. Medications that thin the mucus in the lungs, making it easier to cough out. drugs to expand the airways and minimise inflammation. Special techniques and technologies to aid in the removal of mucus from the lungs

Disease B: **Tuberculosis**

**Causes:** Mycobacterium tuberculosis is a type of bacteria that causes tuberculosis (TB). When a person with active TB disease in their lung's coughs or sneezes, TB bacteria-containing droplets that are ejected are inhaled by the other person. Tuberculosis is brought on by microbes that travel from person to person through the air. Symptoms and diagnosis: Feelings of sickness or weakness, weight loss, a fever, and night sweats are all common signs of TB disease. Chest pain, coughing, and coughing up debris are other signs of TB lung disease. The location of the infection determines the symptoms of TB disease in different body areas. The two types of tests used to detect TB germs in the body are the TB skin test (TST) and the TB blood test. A positive TB skin test or TB blood test reveals only the presence of the TB bacteria. It cannot determine whether a person has a latent TB infection (LTBI) or whether their TB condition has advanced.

**Treatments:** Isoniazid INH is frequently used in conjunction with the medications revamping, pyrazinamide, and ethambutol to treat active TB. Even though you might start feeling better just a few weeks after starting the medication, TB treatment takes far longer than treating other bacterial infections.

**Prevention:** Recommending the most suitable curative and preventative treatments. keeping up physical defences against airborne microbial infection. provide isolation facilities for those who have contagious tuberculosis or who are suspected of having it. checking for tuberculosis and tuberculous infection in healthcare institution staff. TB can hang in the air for several hours without ventilation, so it is important to have excellent ventilation. UV light destroys the TB bacteria naturally. Good hygiene, when coughing or sneezing, cover your mouth and nose to stop the transmission of TB bacteria.