



Deficiency (or excess) Disorders required for Leaving Cert Biology

| Chapter | Deficiency Disorder | Symptoms | Causes | Treatment | Prevention |
|--------------------------------------|----------------------------------|---|--|--|--|
| Food | Scurvy | Bleeding Gums | Lack of Vitamin C | Vitamin C supplement | Eat more citrus fruit |
| Food | Rickets in children | Bowed legs or knocky knees | Lack of Vitamin D and Calcium | Supplement (Vit (D) or Calcium) | Eat more dairy produce |
| Food | Chlorosis (plants) | Yellow grass | Lack of Magnesium | Fertiliser rich in Magnesium | Crop Rotation |
| Food/ The Circulatory System (blood) | Anaemia | Chronic fatigue | Lack of Iron | Iron supplement | Eat more red meat and green vegetables |
| The Digestive System | Stomach Ulcers | Stomach pain | Excess production of acid | Medication | Improved diet |
| The Endocrine System | Diabetes- lack of insulin | Excess thirst, weight loss | Failure to regulate insulin production | Insulin injections | None but a healthy diet will prevent type 2 diabetes |
| The Endocrine System | Hyperinsulinemia- excess insulin | weight gain/ intense hunger/ fatigue | too much insulin produced | diet/exercise/ weight loss | Balanced diet |
| The Nervous System | Parkinson's disease | Shaking of hands and twitching of muscles | Failure to produce the neurotransmitter dopamine | Medication that mimics dopamine (L-dopa) | None |
| The Circulatory System (heart) | Heart Attack | Pains in chest and left arm, shortness of breath | Inability of blood to reach the heart due to a blockage caused by fatty foods/smoking/ cholesterol | Surgery | Healthy diet, exercise and medication |
| The Breathing System | Asthma | Shortness of breath, coughing | Presence of allergens and other dust mites | Inhaler | Remove allergens |
| Plant Reproduction Or Human Defence | Hay Fever | Sneezing, running eyes, itchy eyes, inflamed nose | Allergic reaction to pollen | Antihistamine | Avoid high pollen areas during spring and summer |

Continued on page 2



| Chapter | Deficiency Disorder | Symptoms | Causes | Treatment | Prevention |
|-----------------------------|---|---|--|--|--|
| The Musculoskeletal System | Arthritis | Swelling and pains of joints | Wear of cartilage due to lack of production of synovial fluid | Rest, gentle exercise, anti-inflammatory medication, joint replacement | Avoid hard surfaces, correct footwear, avoid injuries |
| The Musculoskeletal System | Osteoporosis | Brittle and easily broken bones | Porous bones and loss of bone density due to loss of protein and minerals or due to decrease in hormones | Hormone therapy | Improved diet with calcium and vitamin D, exercise and supplements |
| Human Reproduction | Fibroids (benign tumours on ovaries)-menstrual cycle disorder | Failure to conceive | Allergic reaction to oestrogen | Surgery | None but balanced diet/exercise may help. |
| Human Reproduction | Male Infertility | Failure to conceive | Low sperm count, low sperm motility or hormone imbalance | Weight loss, alter diet, hormone corrective medication | Balanced Diet, avoid sauna |
| Human Reproduction | Female Infertility | Failure to conceive | Blockage in the fallopian tubes | Surgery | None |
| Senses | Short sighted (sense-eye) | Can't see objects in distance | Image not reaching retina | Concave lenses | None |
| Senses | Glue ear (sense-ear) | Pain, imbalance | Fluid in middle ear | Grommets | None |
| The Urinary System (kidney) | Urinary Tract Infection | Burning sensation/urgency to urinate | Bacteria present in the urinary system | Antibiotics | Probiotics |
| The Urinary System (kidney) | Kidney Stones | Abdominal pain | Crystal formation due to excess protein consumption | Surgery | Eat a protein diet within recommended guidelines |
| The Urinary System (kidney) | Kidney Failure (renal tubule failure) | Water retention/weight loss/ fatigue/ increased heart rate..... (any one) | Cancer/diabetes/ genetics... any one | Dialysis/ Kidney transplant | None (for genetics) Balanced diet (for diabetes) |