



Nutrition

# Reducing the risk of cancer

## Lesson 2

This course can educate you in understanding what action you can take to reduce the risk of cancer.





**Diet and lifestyle factors can account for approximately 42% of all cancers developed. This means that a large number of cancer cases are preventable.**





Certain cancers are more preventable than others when linked to lifestyle and diet. The strongest link with lifestyle and diet is gastrointestinal cancers e.g. mouth, stomach, bowel and throat.





**The second most preventable cause of cancer in the UK is obesity and being overweight.**





**The cancers  
which are linked  
with obesity and  
being overweight  
are:**

- Breast
- Bowel
- Ovarian
- Prostate
- Endometrial
- Pancreatic
- Liver
- Kidney
- Stomach
- Gallbladder
- Oesophageal



**An increase in body fat reduces insulin sensitivity, increases oestrogens circulating in the body and increases the inflammatory response of the body. All of the issues are what makes the chances of developing cancer more likely.**



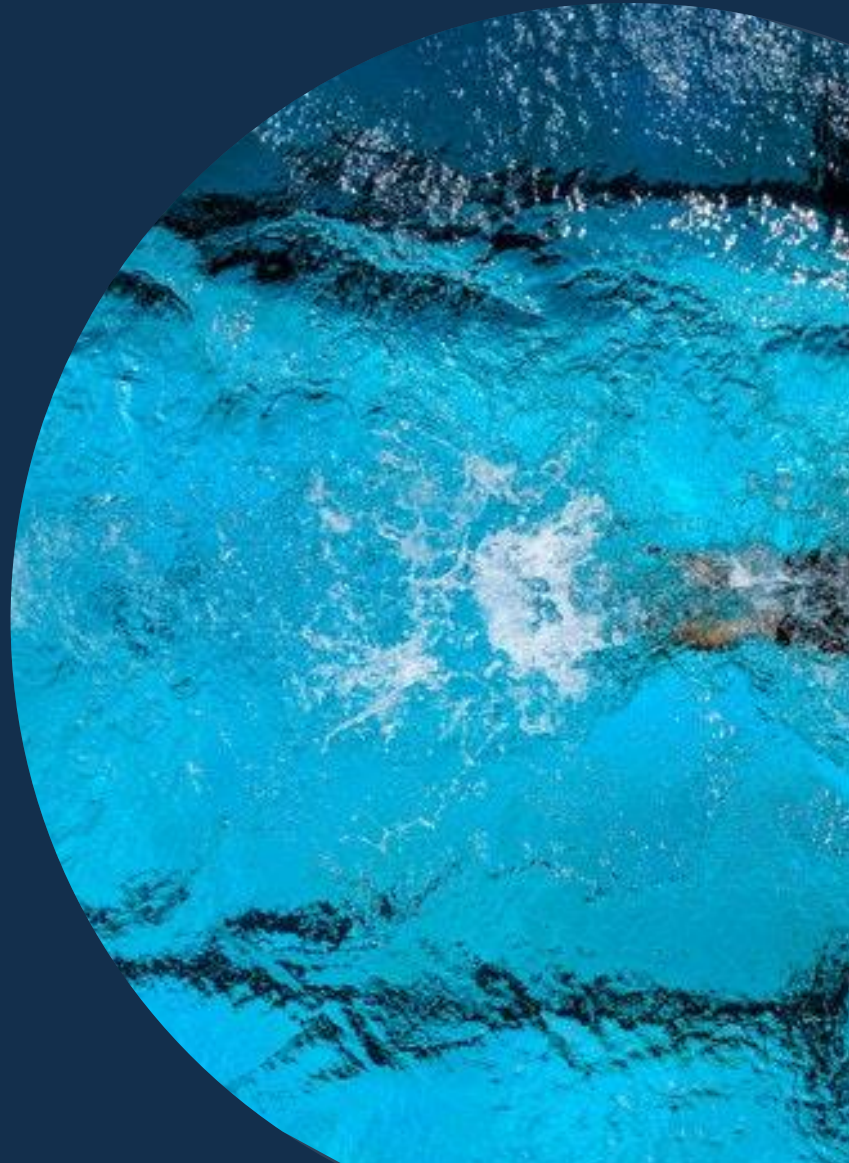


**Physical activity  
can help in  
reducing cancers  
caused by being  
overweight and  
obese.**





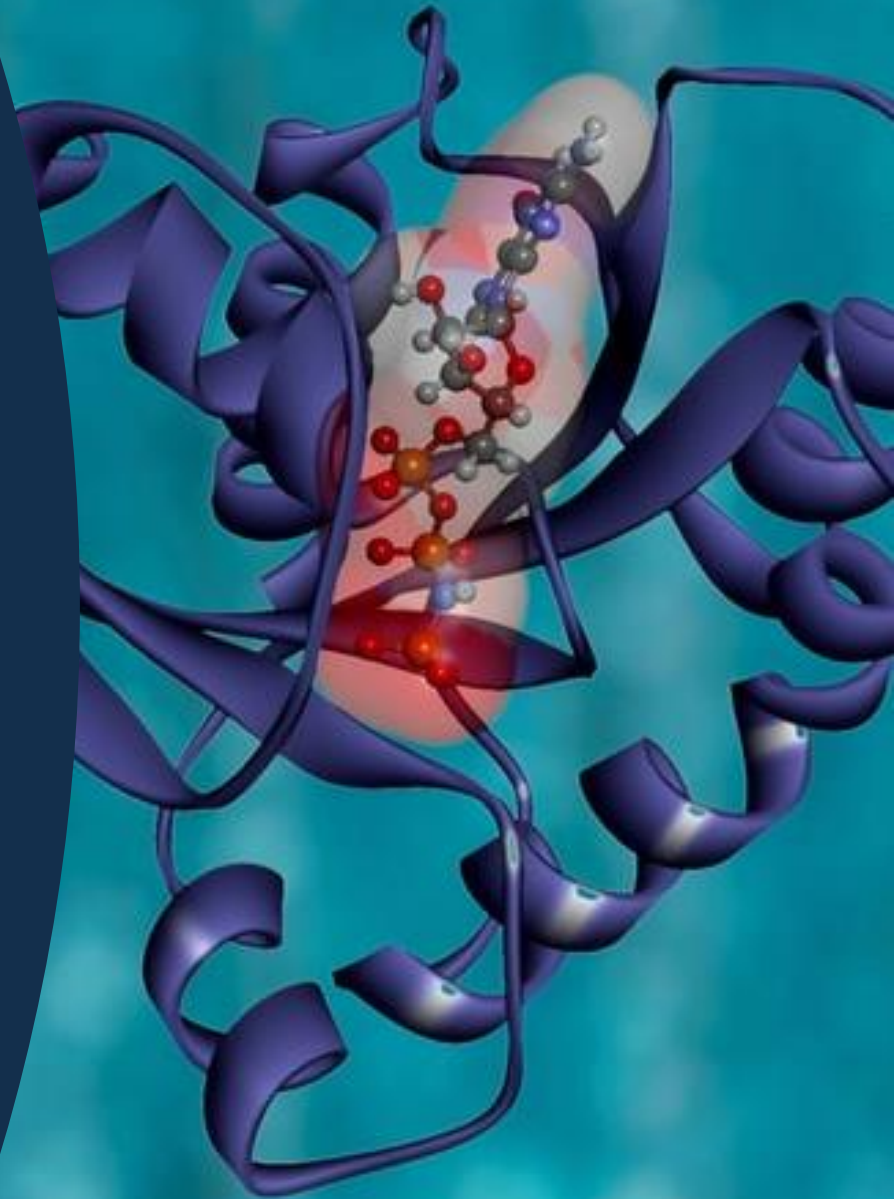
**There are three types of cancer which physical activity is thought to help in reducing the chances of developing them. These are bowel, breast and endometrial cancer.**







**In colon cancer  
it is thought that  
physical activity  
can decrease  
insulin  
resistance and  
the time of gut  
transit.**





In endometrial and breast cancer physical activity is thought to help to strengthen the immune system, decrease androgens and oestrogens circulating in the body. Which all help to reduce the likelihood of cancer developing.





Some research has found that plant based diets can protect against some cancers especially mouth, larynx and pharynx.





Foods high in fibre such as cereals, plantains and roots are described as protecting the body against colorectal cancer.





Foods high in Vitamin C such as fruit are effective in protecting the body against cancer by decreasing the oxidation damage of the bodies cells. It also can stop the production of carcinogens and stop DNA from mutating.





**There is an increased chance of developing bowel or stomach cancer if too much red and processed meat is consumed often.**





Chemicals produced on cooked meat such as heterocyclic amines and polycyclic aromatic hydrocarbons are thought to be the cause of red and processed meat causing cancer.





**Another reason is that when red meat is consumed there is a formation of nitrosamines which can cause DNA damage. The gut can also convert any nitrates which are found on processed meats into nitrosamines again causing DNA damage.**





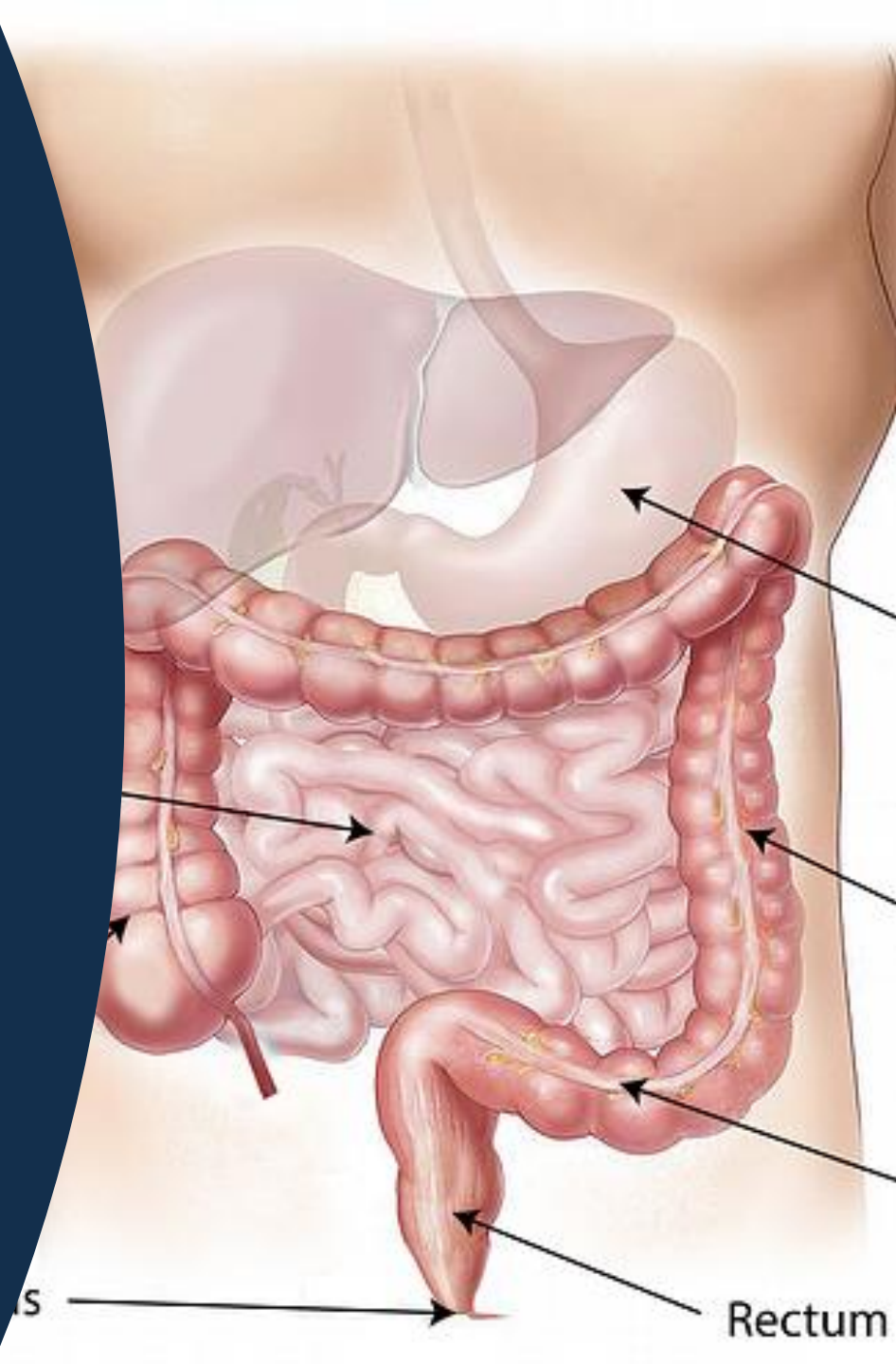


The cancers caused by alcohol consumption are:

- Mouth/throat
- Stomach
- Oesophageal
- Breast
- Liver
- Bowel



With colorectum cancer it is thought that any bacteria in the intestine causes oxidation of ethanol (which is from alcohol) in the tissue and very high levels of acetaldehyde are produced as a result. This very high level of acetaldehyde are considered to be carcinogenic.





With breast cancer it is thought that alcohol can have an affect on the bodies oestrogen pathways leading to problems with the level of hormones and oestrogen receptors in the body.





There are studies which state that a high consumption of salt can increase the risk of developing stomach cancer.





Breastfeeding has been suggested as an effective way of reducing the chance of the mother developing breast and ovarian cancer. This is thought to be due to the alteration of hormones in the body. It is recommended to exclusively breast feed a baby for the first 6 months.





# Revision Activity 2

**What cancers are caused by consuming alcohol?**