Diet, lifestyle and preventing cancer

Practitioner viewpoints

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Evidence behind lifestyle and cancer

- Adopting the healthiest lifestyle was associated with a 29 and 52% lower risk of incident cancer and cancer mortality compared with having the least healthy lifestyle.

- Adopting healthy lifestyles was associated with lower risks of several site-specific cancers:
  - Bladder
  - Breast
  - Colon
  - Colorectal
  - Endometrial
  - Oesophageal
  - Kidney
  - Liver
  - Lung
  - Prostate
  - Rectum
  - Skin
  - Stomach
  - Thyroid

- Gastric cancer
<table>
<thead>
<tr>
<th>Cancer site</th>
<th>Overall classification of evidence</th>
<th>Magnitude of relative risk increase for BMI ≥ 25 versus BMI &lt; 25</th>
<th>Evidence for dose–response effect</th>
<th>Biologic plausibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorectal</td>
<td>Strong</td>
<td>10–30%</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Gastric cardia</td>
<td>Strong</td>
<td>20–80%</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Esophagus</td>
<td>Strong</td>
<td>15–480%</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Liver</td>
<td>Strong</td>
<td>50–80%</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Postmenopausal breast</td>
<td>Strong</td>
<td>10–12%</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Gallbladder</td>
<td>Strong</td>
<td>20–60%</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Endometrial</td>
<td>Strong</td>
<td>50–710%</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Renal/kidney</td>
<td>Strong</td>
<td>30–80%</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Meningioma</td>
<td>Strong/Moderate</td>
<td>40–213%</td>
<td>Limited</td>
<td>Limited</td>
</tr>
<tr>
<td>Pancreatic</td>
<td>Strong</td>
<td>20–50%</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Multiple myeloma</td>
<td>Strong/Moderate</td>
<td>15–52%</td>
<td>Limited</td>
<td>Limited</td>
</tr>
<tr>
<td>Ovarian</td>
<td>Moderate</td>
<td>10–20%</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Thyroid</td>
<td>Moderate</td>
<td>4–17%</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Causes of Cancer**

- Tobacco
- Alcohol
- Overweight
- Physical inactivity
- Diet
- Environment
- Medication
- Infection
- Sun & radiation
- Reproductive factors
- Family history
• Body weight: each five-unit increase in body mass index is associated with 5–50% higher risks of
  • Postmenopausal breast
  • Colon and rectal
  • Endometrial
  • Oesophageal
  • Gallbladder
  • Kidney
  • Liver
  • Ovarian
  • Pancreas
  • Stomach cardia
  • Thyroid cancer
  • Meningioma
  • Multiple myeloma
• Obese men and women have 6 and 10% higher risks of cancer mortality

• For physical activity and diet, individuals in the highest group had
  • 9%-42% (physical activity) and 10% (diet) lower risks of cancer
  • 20 (physical activity) and 22% (diet) lower risks of cancer mortality
• There is a doseresponse association between alcohol consumption and cancer risk:
  • Drinking 50 and 100 g of ethanol per day → 22 and 91% higher risks of incident cancer compared with abstainers
  • Heavy drinkers were associated with a 31% higher risk of cancer mortality compared with non-drinkers

• Tobacco smoking is the most important risk factor for cancer morbidity and mortality
In conclusion...

- Adopting healthy lifestyles is associated with lower risks of cancer morbidity and mortality.
- Creating an environment for better facilitating behaviour modifications should be a public health priority worldwide.
- The proportion of individuals having the healthiest lifestyles is low in many countries.
- Adopting the healthiest lifestyles was associated with a 30% lower risk of cancer mortality among cancer survivors.

- No randomised controlled trials have provided evidence for the effects of multiple lifestyle interventions on cancer prevention and prognosis.
- More studies are still needed for site specific cancers, and more evidence among cancer survivors and from populations in low- and middle-income countries is warranted.
Primary Prevention Meeting

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