

Alcohol Drinking and Alcohol-related Liver Disease

Key Messages

- ※ Drinking alcohol is associated with increasing risk of developing mental and behavioural disorders as well as major non-communicable diseases, such as cardiovascular diseases, some cancers and liver problems. Alcoholic-related liver disease comprises a spectrum of liver conditions ranging from alcoholic fatty liver to alcoholic steatohepatitis (liver inflammation with fat accumulation) and irreversible alcoholic liver cirrhosis.
- ※ The progression and severity of alcohol-related liver disease is highly dependent on the amount and duration of alcohol consumption as well as the drinking pattern (such as frequent or binge drinking).
- ※ Among local persons aged 15 or above, the Population Health Survey 2020-22 observed that 8.7% of them drank alcohol regularly (i.e. drank at least once a week), including 2.1% reported daily drinking; 2.0% of them reported binge drinking at least once per month during the 12 months preceding the survey.
- ※ Alcohol is a cancer causing agent and there is no safe level of alcohol consumption; alcohol use increases health risks even drinking low to moderate amount. Thus, non-drinkers should not start drinking. Alcohol drinkers are advised to appreciate the benefits of stopping drinking completely or cutting down alcohol consumption.
- ※ To access the self-help booklet for drinkers to assess their own drinking risk or want to know more about alcohol-related harm, please visit the Change for Health website at https://www.change4health.gov.hk/en/alcohol_aware/index.html.

Alcohol drinking and Alcohol-related Liver Disease

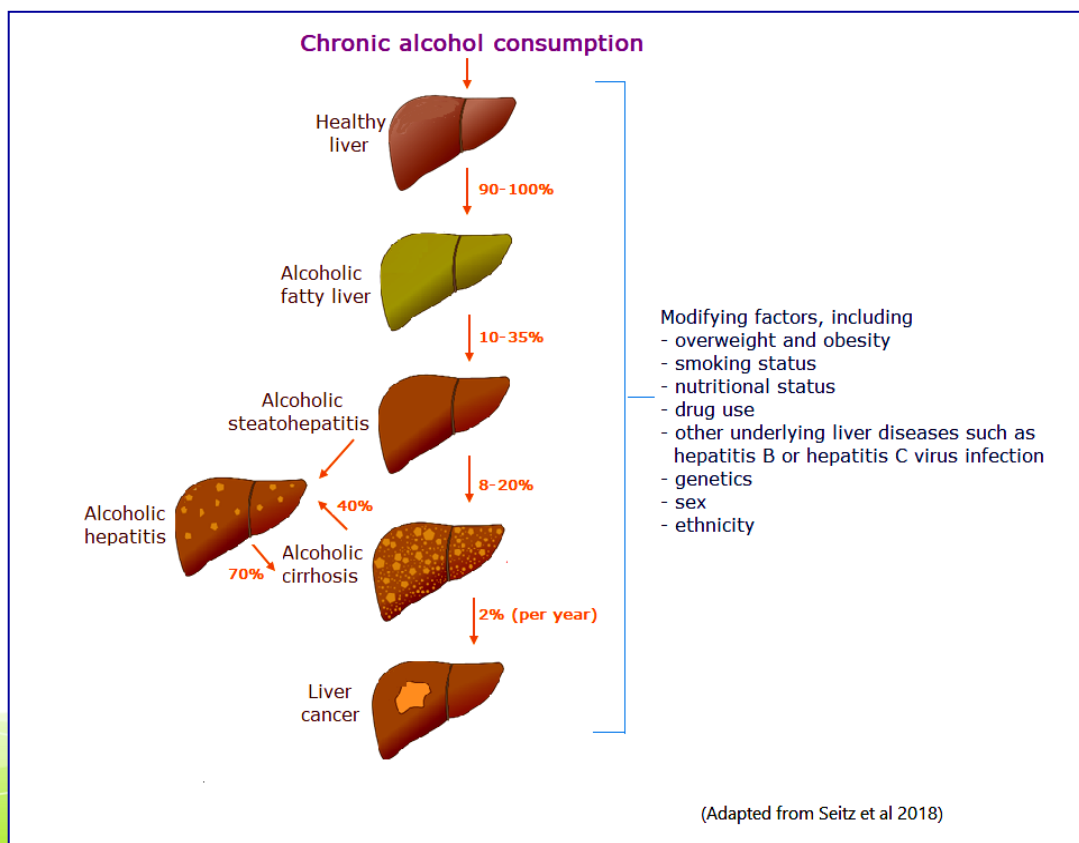
Drinking alcohol is associated with increasing risk of developing mental and behavioural disorders (including alcohol dependence), as well as major non-communicable diseases such as cardiovascular diseases and some cancers¹. Since the liver is the primary organ that breaks down alcohol (ethanol) in the body and therefore particularly susceptible to injury and inflammation induced by the toxic metabolites and byproducts of alcohol (such as acetaldehyde)², alcohol drinking can also result in alcohol-related liver disease (also called alcoholic liver disease) which comprises a spectrum of liver conditions ranging from relatively mild and reversible alcoholic fatty liver to alcoholic steatohepatitis (liver inflammation with fat accumulation) and irreversible alcoholic liver cirrhosis. In fact, alcohol-related liver disease is one

of the most common type of chronic liver diseases worldwide³. Between 1990 and 2019, the Global Burden of Disease Study⁴ estimated that the number of incidences of alcohol-induced cirrhosis and other chronic liver diseases worldwide increased by nearly 83% from about 239 000 to 436 000. The number of deaths attributed to alcohol-induced cirrhosis and other liver chronic diseases also increased from about 233 000 to 372 000, representing nearly 60% increase globally.

Clinical Course and Risk Factors of Alcohol-related Liver Disease

Alcohol-related liver disease generally follows a well-recognised pattern of disease progression (Figure 1)⁵.

Figure 1: The natural disease course of alcohol-related liver disease



As alcohol interferes with lipid metabolism and induces fat deposition in the liver, the disease begins with fatty liver that is usually asymptomatic. If symptoms are present, they are usually non-specific that may include fatigue, loss of appetite and discomfort in the upper right side of the abdomen. Among chronic heavy alcohol drinkers, vast majority (90–100%) would develop alcoholic fatty liver. With immediate cessation of alcohol consumption, the liver damage caused by alcohol-related fatty liver disease can usually be reversed. Heavy drinkers may also progress to alcoholic steatohepatitis (possibly with symptoms like jaundice, nausea and vomiting, etc.), and some will further progress to alcoholic liver cirrhosis (which may present with symptoms such as bruising and bleeding easily, upper abdominal pain, accumulation of fluid in the abdomen, swelling of the legs or feet, patchy red skin on the palm, dark coloured urine and light coloured stool). Individuals with severe alcoholic steatohepatitis (with or without cirrhosis) may also develop alcoholic hepatitis (an inflammatory syndrome associated with acute onset of jaundice and possibly liver failure). Of the patients with alcoholic cirrhosis, about 2% per year will eventually develop liver cancer⁵.

The progression and severity of alcohol-related liver disease is highly dependent on the amount and duration of alcohol consumption as well as the drinking pattern (such as frequent or binge drinking, drinking with meals or drinking with an empty stomach). While a number of factors can also increase individual's risk of development or progression of alcohol-related liver disease, such as obesity, smoking, mal-

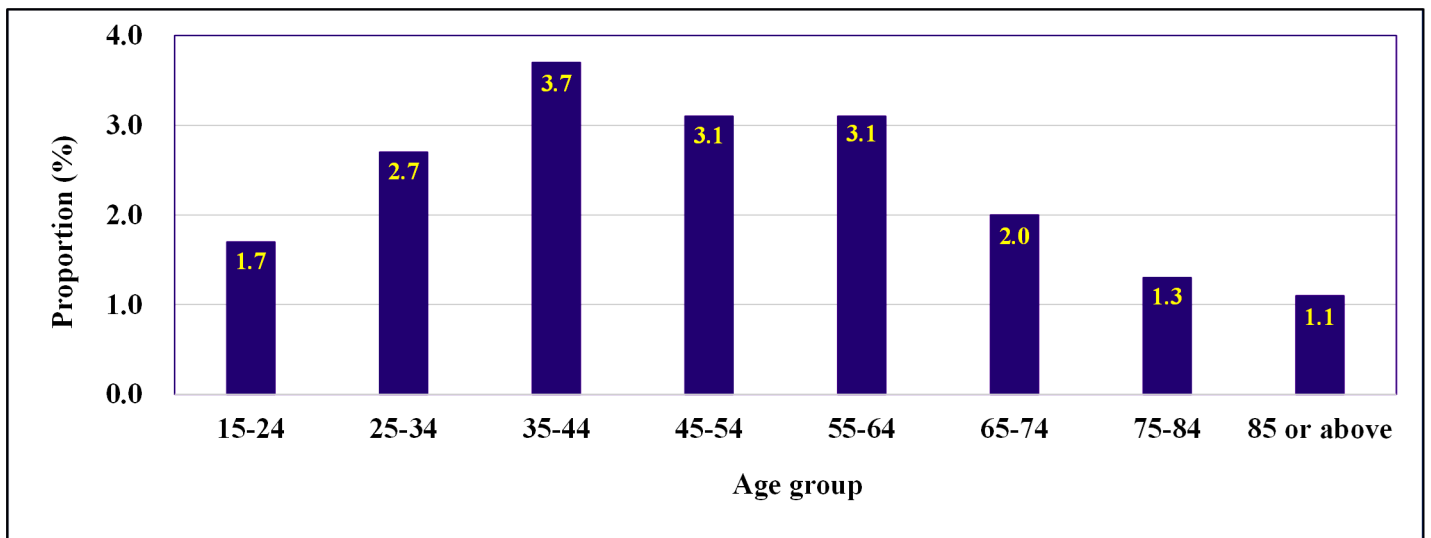
nutrition, improper drug use or the presence of other underlying liver diseases^{5, 6}, women would have a significantly higher relative risk of developing alcoholic liver disease than men at any given level of alcohol drinking^{7, 8}. In mainland China, a 10-year prospective study included nearly 0.5 million adults and assessed the associations of alcohol consumption and drinking patterns with incidence of major chronic liver diseases⁹. Among male current regular drinkers, after adjustment for the total amount of weekly alcohol consumption, the study found that daily drinkers were more than twice as likely to develop alcohol-related liver disease compared with non-daily drinkers. Similarly among males, heavy episodic drinking/binge drinking (defined as consuming 60 grams or more of alcohol on a typical drinking occasion) was also associated with 69% increased risk of alcohol-related liver disease. Compared with drinking with meals, drinking without meals would increase alcohol-related liver disease risk by 60%. Among female current regular drinkers, the study also found a significant increase in alcohol-related liver disease risk (more than 6-fold) compared with female abstainers. In the United Kingdom, a prospective study followed-up over 400 000 middle-aged women for a mean of 15 years also observed that cirrhosis incidence increased with total amount of alcohol consumed per week, even at moderate levels of consumption (such as 3–6 drinks per week). In addition, daily alcohol consumption, together with drinking without meals, would double the risk of liver cirrhosis¹⁰.

Alcohol Consumption and Alcohol Use Disorders among the Local Population

The Department of Health (DH) conducted the Population Health Survey (PHS) 2020-22¹¹ and observed that 8.7% (14.1% for males; 4.0% for females) of local persons aged 15 or above drank alcohol regularly (i.e. drank at least once a week) in the 12 months preceding the survey, including 2.1% (3.8% for males; 0.6% for females) reported daily drinking. Persons aged 75–84 (3.3%) were more likely than persons in other age groups to report daily drinking. In addition, 2.0% (3.3% for males; 0.8% for females) of persons aged 15 or above reported binge drinking (i.e. consuming 5 or more portions of alcoholic beverages on one occasion) at least once per month during the 12 months preceding the survey. Persons aged 35–44 (2.9%) were more likely to report so.

The PHS 2020-22 had also adopted the 10-item Alcohol Use Disorders Identification Test (AUDIT) to assess the risk of alcohol use among the local population. With the score of each item ranging from 0 to 4 and therefore a total AUDIT score of 0–40, an AUDIT score of 8 or more would indicate having a drinking problem or even alcohol use disorder (8–15: drinking at increased risk; 16–19: harmful drinking; 20–40: probable alcohol dependence). Among persons aged 15 or above, 2.7% (4.5% for males; 1.1% for females) of them had an AUDIT score of 8 or above. More persons aged 35–44 (3.7%) were drinking at increased risk with an AUDIT score of 8 or above than those in other age groups (Figure 2)¹¹.

Figure 2: Proportion of persons aged 15 or above having an AUDIT score 8 or above by age group

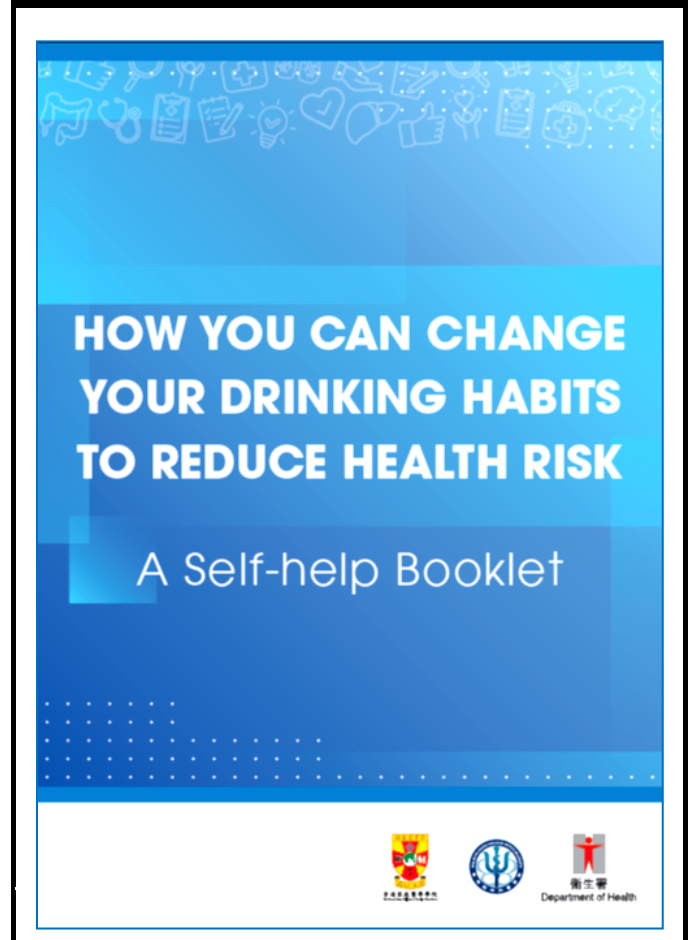


Source: Population Health Survey 2020-22.

Free From Alcohol Trap

Alcohol is a cancer causing agent and there is no safe level of alcohol consumption; alcohol use increases health risks even drinking low to moderate amount^{12, 13}. Thus, non-drinkers should not start drinking, falsely believing or assuming that alcohol consumption can lift mood, relieve stress, induce sleep or improve health. Alcohol drinkers are urged to appreciate the health benefits of stopping drinking completely or cutting down alcohol consumption. The DH has produced various Alcohol Fails Toolkits for promulgating to primary healthcare professionals and other education materials pertaining to reducing harmful use of alcohol among the general public, including a self-help booklet for drinkers to assess their own drinking risk and help them change drinking habits in order to prevent alcohol-related health problems (Box 1). To access the self-help booklet or want to know more about alcohol-related harm, please visit the Change for Health website of the DH at https://www.change4health.gov.hk/en/alcohol_aware/index.html. If indicated, talk to a healthcare professional. The DH will continue to disseminate relevant information to the public, increase people's literacy on potential effects of alcohol, and work with primary healthcare professionals to promote early identification of at-risk drinkers for help.

Box 1: A self-help booklet for alcohol drinkers



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Potential Health Risk of Alcohol Consumption: Alcohol and Calories



The poster is accessible at <https://www.change4health.gov.hk/filemanager/publications/en/upload/48/poster.jpg>.

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