

Chinese and Chinese-American Health Statistics, 1950-2020

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Key Findings

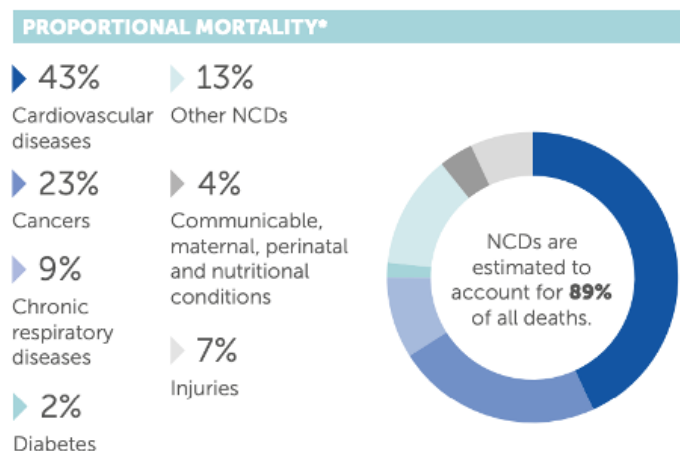
- In China, stroke, ischemic heart disease and COPD are the leading causes of death, while cancer is the leading cause of death in Chinese Americans.
- Smoking, poor diet, low health literacy and alcohol consumption all contribute to higher rates of CVD and cancers, the leading causes of death in Chinese and Chinese-Americans.
- Nasopharyngeal carcinoma is rare in most parts of the world, but a common malignancy in Southern Chinese people, who are at a 26-fold increased risk compared to the rest of the Chinese population.
- The top 10 causes of deaths in Chinese, Chinese-Americans and general population differ. More international research must be conducted to determine the underlying risk factors.

China is the most populous country in the world, with a population of 1.4 billion people, comprising 18% of the world’s population.¹ Chinese Americans are the largest Asian subgroup in the United States, 5.4 million, 59% of whom (3.2 million) are foreign born.² It is crucial to understand differences in the major causes of death among Chinese compared to Chinese Americans. The White House,³ American Heart Association,⁴ and the National Heart Blood and Lung Institute⁵ all note a lack of information in specific Asian American subgroups in the US.

Stroke, ischemic heart disease, and chronic obstructive pulmonary disorder (COPD) are the leading causes of death in China.⁶

- Smoking and tobacco exposure are primary predictors of lung cancer. In China, a far higher proportion of men smoke (52%), compared to women (3%).⁷
- 1 in 4 adults (25%) have hypertension (high blood pressure).⁸ Hypertension rates increase with age, which is a contributor factor to stroke and cardiovascular disease risk.⁸
- The Chinese population displays of the highest incidences of gastric (stomach) cancer and accounts for over 40% of all new gastric cancer causes in the world.⁹
- Esophageal Squamous Cell Carcinoma is the major type of esophageal cancer in China, and more than half the global cases occur here.¹⁰

Figure 1: Proportional Mortality Rates



Source: World Health Organization, Non-Communicable Disease Country Profiles: China

Diverging from mainland China, cancer has surpassed cardiovascular diseases as the leading cause of death for both Chinese American males and females. ¹¹

- The leading cause of death among Chinese-Americans are cancers of the lung, breast, liver, colon, in addition to stomach and pancreas. Lung cancer is the leading cause of cancer-related mortality among Chinese American males and females.¹¹
- Stomach cancer accounts for approximately 10% of Chinese American cancer deaths but less than 2% of non-Hispanic white (NHW) cancer deaths.¹²
- The stomach cancer incidence rate in Chinese female immigrants to the U.S. is twice that of white American women in America. ¹³

Figure 2: Top sites of cancer-related mortality as a proportion of all cancer deaths (2003-2011)¹¹

Table 1: Chinese-American Males

Cancer Type	Proportion of all cancer deaths
Lung	28%
Liver	12%
Colorectal	10%
Stomach	7%
Pancreas	6%

Table 2: Chinese-American Females

Cancer Type	Proportion of all cancer deaths
Lung	22%
Breast	12%
Colorectal	12%
Pancreas	7%
Stomach	5%

- Chronic Hepatitis B, a predisposing factor for liver cancer, displays rates as high as 13% in Chinese.¹⁴ Liver cancer accounts for approximately 10% of Chinese American cancer deaths but less than 2.5% of NHW cancer deaths.¹²
- In China, rates of esophageal squamous carcinoma (SCC) are high, while rates of adenocarcinoma are near 0%.¹⁵ The observed race/ethnic differences may be due to differences in risk factor prevalence for esophageal squamous cell carcinoma (alcohol consumption, smoking) vs adenocarcinoma (obesity, acid reflux) in Chinese vs non-Hispanic whites respectively. ¹⁶
- Lung cancer mortality is higher in male and female Chinese Americans compared to other Asian Americans. ¹²

Smoking ¹⁷, poor diet ¹⁸, low health literacy ¹⁹, and excessive amounts of alcohol consumption ²⁰ all contribute to higher rates of CVD and cancers, the leading causes of death in Chinese and Chinese-Americans.

- Chinese Americans have poorer control of high blood pressure than NHWs and are at higher risk for hypertension, CVD and stroke. ¹⁸
- The Chinese American diet are more likely to be high in salt (MSG, soy sauce and salty flavorings), which contribute to hypertension. ¹⁸
- More than half of Asian Americans with diabetes are undiagnosed, and a large proportion of these are Chinese Americans. ²¹

Nasopharyngeal carcinoma (NPC) is rare in most parts of the world, but is a common malignancy in Southern Chinese people. ²² Nasopharyngeal cancer was elevated 26-fold in Chinese males and 22-fold in Chinese females. ²³

- Consumption of salted fish, a traditional southern Chinese food favorite and the higher incidence of Epstein-Barr virus, is heavily correlated with the high incidence of NPC in the region. Fermented fish sauce, salted shrimp paste, moldy bean curd and preserved plum were also significant for NPC. ²⁴
- Reports indicate that southern Chinese who migrate to intermediate-risk areas (i.e. Southeast Asia) or low-risk areas (i.e. United States, UK, and Australia) continue to have a high incidence of NPC compared to native Chinese. ²³ However, those who resided for a longer period of time in low-risk areas and their offspring have a decreased risk for NPC compared to native Chinese. ²⁴

The top 10 causes of deaths in Chinese, Chinese-American and general American population vary. More research must be conducted to determine the risk factors that underly these differences.

Chinese ²⁵	Chinese-Americans ¹¹	Non-Hispanic Whites (NHWs) ²⁶
1. Stroke	1. Malignant Neoplasms	1. Heart Diseases
2. Ischemic heart disease	2. Cardiovascular Disease	2. Cancer
3. Chronic Obstructive Pulmonary Disease (COPD)	3. Cerebrovascular Disease	3. Accidents
4. Lung cancer	4. Influenza and Pneumonia	4. Chronic Lower Respiratory Disease
5. Alzheimer's disease	5. Diabetes	5. Cerebrovascular Disease
6. Liver cancer	6. Accidents	6. Alzheimer's Disease
7. Stomach cancer	7. Alzheimer's Disease	7. Diabetes
8. Hypertensive heart disease	8. Chronic Lower Respiratory Diseases	8. Influenza and Pneumonia
9. Road injuries	9. Kidney Diseases	9. Kidney Diseases
10. Esophageal cancer	10. Septicemia	10. Suicide

Source: GBD Compare 2018, China

Source: Leading cause of death among Asian American Subgroups (2003-2011) K.Hastings, et al.

Source: NVSS- Leading Causes of Death 2017, Melanie Heron, Ph.D

Summary

Stroke, ischemic heart disease, and cancer are the leading causes of death among both Chinese and Chinese American population. ^{6,11}

The Chinese population also displays one of the highest rates of lung, gastric, esophageal squamous cell carcinoma, and nasopharyngeal cancers in the world. ^{22,25} Poor physician-patient communication,¹⁹ low health literacy,¹⁹ smoking habits,¹⁷ alcohol consumption,²⁰ diet,²² and family history ¹² are primary contributors of these mortality rates. Talk to your provider which cancer screenings should become part of your routine check-up.

Chinese Americans comprise the largest group of Asian Americans in the United States. ² There are unique disease risks for Chinese Americans, with higher prevalence in hypertension ¹⁸, diabetes ²¹, nasopharyngeal cancer ¹², stroke and cardiovascular disease ¹¹. Future efforts should be directed toward personalized screening, prevention, and treatment programs to lower these health risks.

Definitions

Cancer: A disease in which abnormal cells divide uncontrollably with the potential to invade other parts of the body and destroy body tissue.

Cardiovascular Disease (CVD): A cluster of heart conditions involving narrowed, blocked or diseased blood vessels that can lead to chest pain, blood clots, stroke, or heart attack

Cerebrovascular Disease/Stroke: An interruption in the blood supply to the brain, preventing delivery of oxygen and nutrients

Chronic Obstructive Pulmonary Disease (COPD): A chronic disease caused by airflow blockage and breathing-related problems

Death Rate: A measure of the number of deaths among a certain population per unit of time

Diabetes: A disease that results in excess sugar in the blood

Hypertension: Abnormally high blood pressure

Incidence: A measure of the probability of specific medical occurrence in a population during a specific window of time.

Ischemic Heart Disease: A disease caused by an interruption in blood supply to the heart

Malignant Neoplasms: A tumor/abnormal growth caused by cancer

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