# Life Tables for Korea, 2020

> **In 2020, the life expectancy at birth stood at 83.5 years, rising by 0.2 year from 2019.**

○ If people would experience the current age-specific death rates in 2020, the life expectancy at birth of males and females marked 80.5 years and 86.5 years, respectively. These two figures rose by 0.2 year from 2019.

○ In 2020, the gender gap in life expectancy at birth recorded 6.0 years, which showed a decreasing trend after marking a peak of 8.6 years in 1985.

**<Life expectancy at birth and year-on-year change (1970-2020)>**

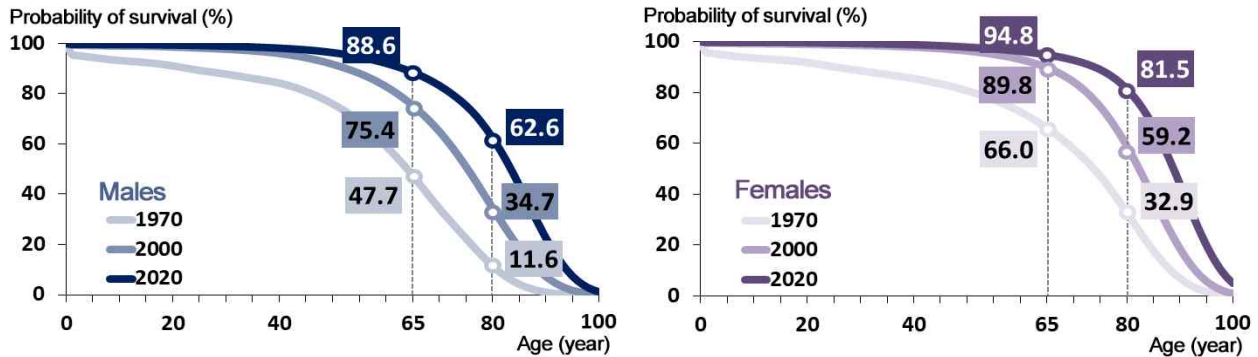**<Life expectancy at birth by sex and gender gap (1970-2020)>**
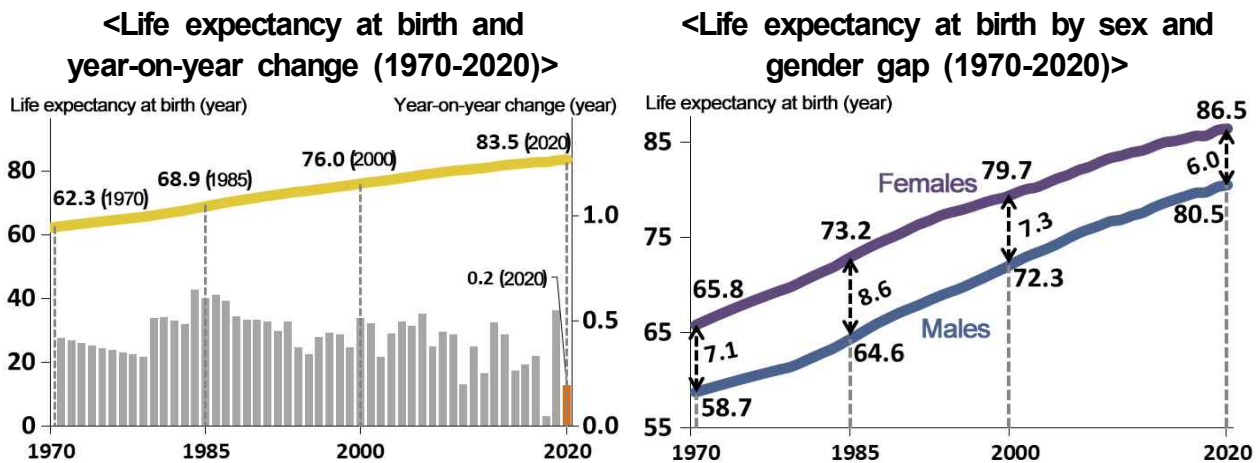


○ In 2020, the remaining life expectancy of males aged 60 recorded 23.4 years, which rose by 0.1 year from 2019. The remaining life expectancy of females aged 60 recorded 28.2 years, which rose by 0.2 year from 2019.

**<Remaining life expectancy by sex and age (1970, 2020)>**
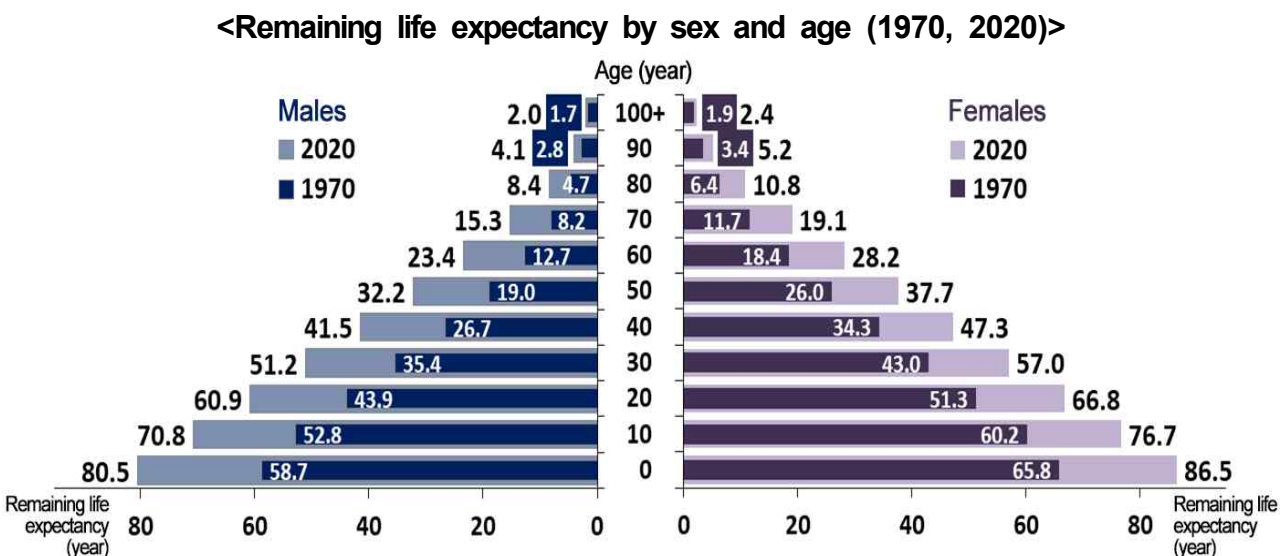
○ As for people born in 2020, the probability of survival to 80 years of males recorded 62.6%, up 0.8%p from 2019. The probability of survival to 80 years of females recorded 81.5%, up 0.5%p from 2019.

**<Probability of survival to 65 years and 80 years by sex (1970, 2000. 2020)>**



Males: 1970, 2000, 2020 — values 88.6, 75.4, 62.6, 47.7, 34.7, 11.6

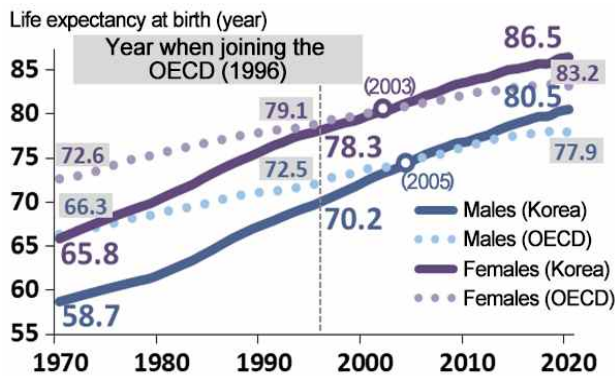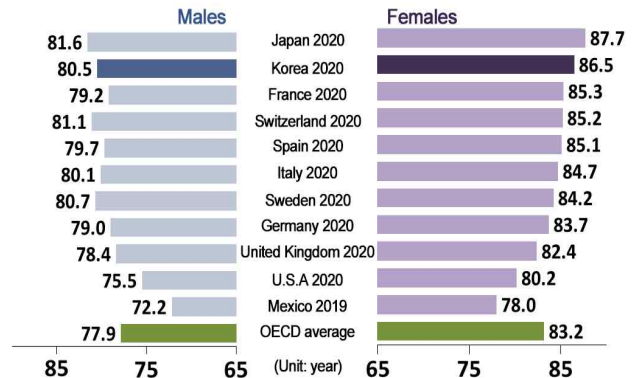Females: 1970, 2000, 2020 — values 94.8, 89.8, 81.5, 66.0, 59.2, 32.9

> **The life expectancy at birth of Korean males was 2.6 years longer than the OECD average of males. The life expectancy at birth of Korean females was 3.3 years longer than the OECD average of females.**

○ The life expectancy at birth of Korean males stood at 80.5 years, which was 2.6 years longer than the OECD average of males (77.9 years). The life expectancy at birth of Korean females stood at 86.5 years, which was 3.3 years longer than the OECD average of females (83.2 years).

**<Life expectancy at birth: OECD average and Korea (1970-2020)>**



**<Life expectancy at birth of major OECD member countries>**

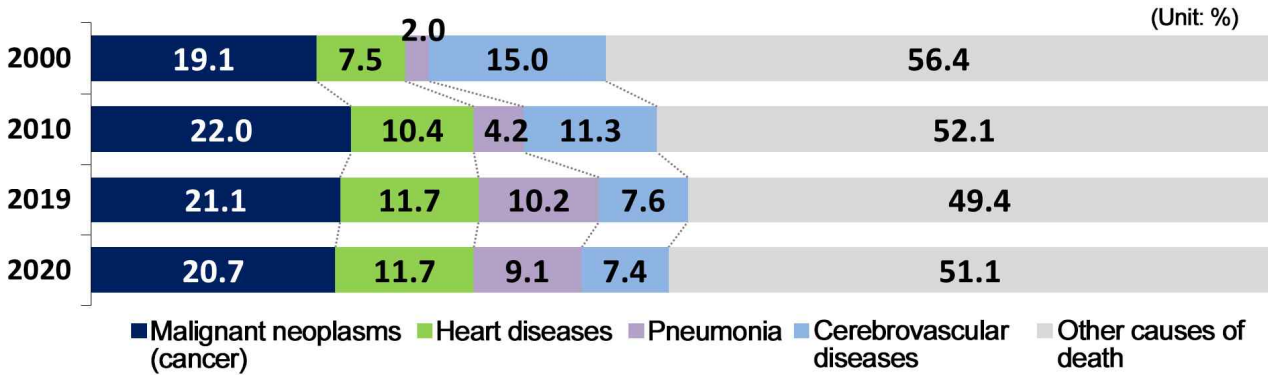| | Males | | Females |
|---|---|---|---|
| Japan 2020 | 81.6 | | 87.7 |
| Korea 2020 | 80.5 | | 86.5 |
| France 2020 | 79.2 | | 85.3 |
| Switzerland 2020 | 81.1 | | 85.2 |
| Spain 2020 | 79.7 | | 85.1 |
| Italy 2020 | 80.1 | | 84.7 |
| Sweden 2020 | 80.7 | | 84.2 |
| Germany 2020 | 79.0 | | 83.7 |
| United Kingdom 2020 | 78.4 | | 82.4 |
| U.S.A 2020 | 75.5 | | 80.2 |
| Mexico 2019 | 72.2 | | 78.0 |
| OECD average | 77.9 | | 83.2 |

> **As for people born in 2020, the probability of dying from cancer recorded the highest figure of 20.7%, which was followed by heart diseases (11.7%), pneumonia (9.1%) and cerebrovascular diseases (7.4%).**

○ Compared to 2019, the probability of dying from septicemia marked the highest increase for males and females.

**\<Probability of dying from leading causes of death (2000-2020)\>**

(Unit: %)

| Year | Malignant neoplasms (cancer) | Heart diseases | Pneumonia | Cerebrovascular diseases | Other causes of death |
|------|------|------|------|------|------|
| 2000 | 19.1 | 7.5 | 2.0 | 15.0 | 56.4 |
| 2010 | 22.0 | 10.4 | 4.2 | 11.3 | 52.1 |
| 2019 | 21.1 | 11.7 | 10.2 | 7.6 | 49.4 |
| 2020 | 20.7 | 11.7 | 9.1 | 7.4 | 51.1 |

■ Malignant neoplasms (cancer)　■ Heart diseases　■ Pneumonia　■ Cerebrovascular diseases　■ Other causes of death
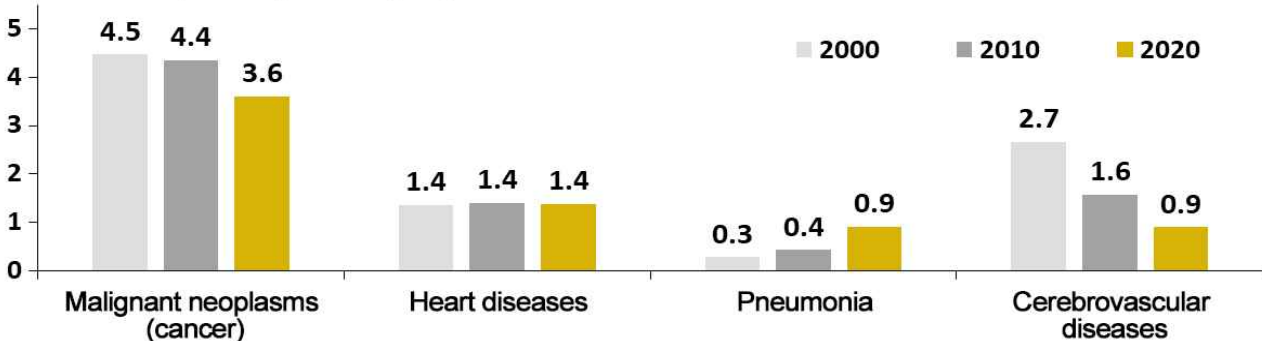
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## When eliminating cancer from causes of death, the life expectancy at birth would increase by 3.6 years.

○ As for people born in 2020, the life expectancy at birth would increase by 3.6 years when eliminating cancer from causes of death, by 1.4 years when eliminating heart diseases and by 0.9 year when eliminating pneumonia.

**\<Gains in life expectancy at birth when eliminating major causes of death (2000, 2010, 2020)\>**
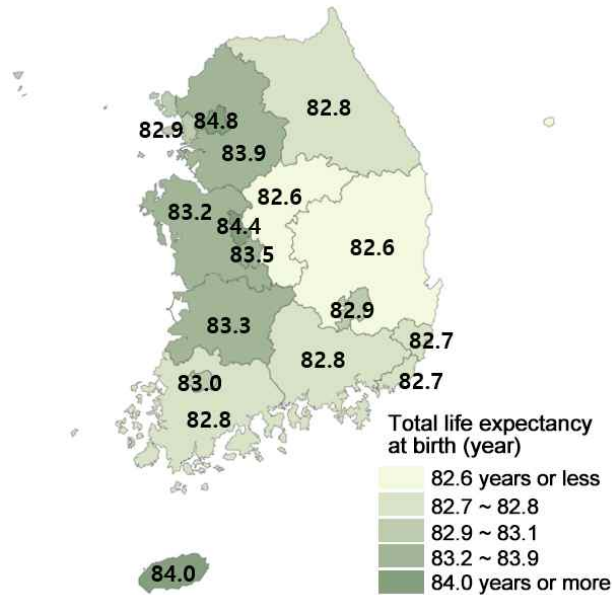
Gains in life expectancy at birth (year)

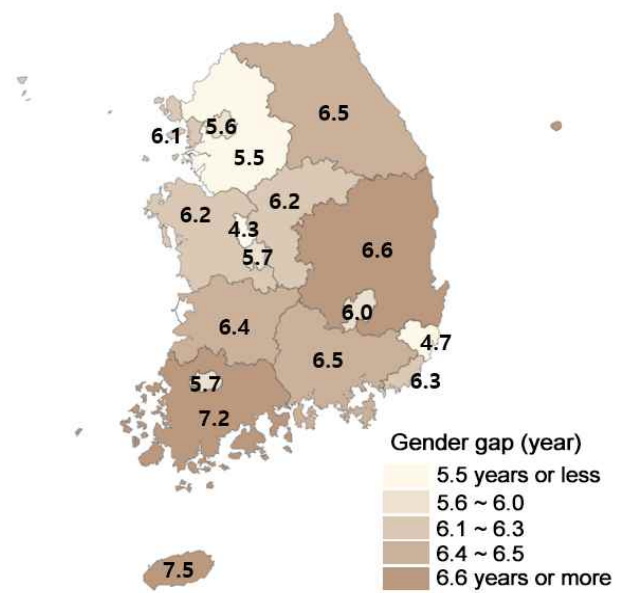| Cause | 2000 | 2010 | 2020 |
|-------|------|------|------|
| Malignant neoplasms (cancer) | 4.5 | 4.4 | 3.6 |
| Heart diseases | 1.4 | 1.4 | 1.4 |
| Pneumonia | 0.3 | 0.4 | 0.9 |
| Cerebrovascular diseases | 2.7 | 1.6 | 0.9 |

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## As for the life expectancy at birth by province, in 2020, Seoul recorded the highest figure, which was followed by Sejong. Gyeonbuk recorded the lowest figure, which was followed by Chungbuk.

○ As for the life expectancy at birth by province, in 2020, Seoul recorded the highest figure of 84.8 years, which was followed by Sejong (84.4 years). Gyeongbuk recorded the lowest figure of 82.6 years, which was followed by Chungbuk (82.6 years). The largest gap between the highest and lowest figures stood at 2.2 years.

○ Jeju (7.5 years) recorded the highest gender gap in life expectancy at birth. Sejong (4.3 years) recorded the lowest gender gap in life expectancy at birth.

**<Life expectancy at birth by province (2020)>**



82.9  84.8  82.8
83.9
83.2  82.6
84.4
83.5  82.6
82.9
83.3  82.7
82.8
83.0  82.7
82.8

84.0

Total life expectancy at birth (year)
82.6 years or less
82.7 ~ 82.8
82.9 ~ 83.1
83.2 ~ 83.9
84.0 years or more

**<Gender gap in life expectancy at birth by province (2020)>**



6.1  5.6  6.5
5.5
6.2  6.2
4.3
5.7  6.6
6.0
6.4  4.7
6.5
5.7  6.3
7.2

7.5

Gender gap (year)
5.5 years or less
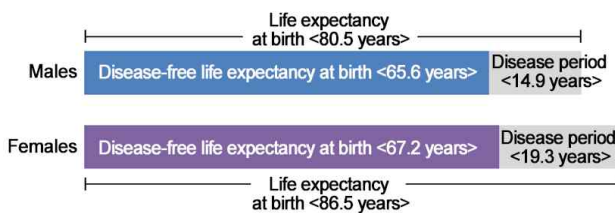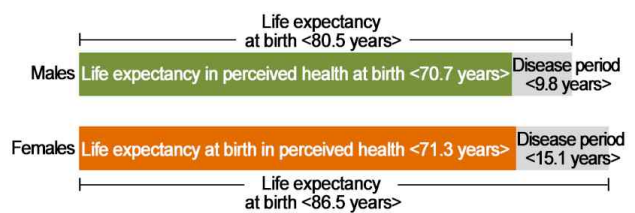5.6 ~ 6.0
6.1 ~ 6.3
6.4 ~ 6.5
6.6 years or more

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**As for people born in 2020, the disease-free life expectancy at birth stood at 66.3 years. Life expectancy in perceived health at birth stood at 71.0 years.**

○ The disease-free life expectancy at birth of males recorded 65.6 years (81.4% of the life expectancy at birth). The disease-free life expectancy at birth of females recorded 67.2 years (77.7% of the life expectancy at birth).

**<Disease-free life expectancy at birth (2020)>**



Life expectancy at birth <80.5 years>

Males | Disease-free life expectancy at birth <65.6 years> | Disease period <14.9 years>

Females | Disease-free life expectancy at birth <67.2 years> | Disease period <19.3 years>

Life expectancy at birth <86.5 years>

**<Life expectancy in perceived health at birth (2020)>**



Life expectancy at birth <80.5 years>

Males | Life expectancy in perceived health at birth <70.7 years> | Disease period <9.8 years>

Females | Life expectancy at birth in perceived health <71.3 years> | Disease period <15.1 years>

Life expectancy at birth <86.5 years>

## ☐ Outline of 2020 Life Tables

○ **(Definition)** Life tables refer to statistical tables that estimate how many years people at a certain age would live when they would experience the current age-specific death rates.

○ (Methodology) Life tables are complied on the basis of death report data that are submitted to Eup, Myeon & Dong offices or Si and Gu offices, according to the 'Statistics Act' and the 'Act on Registration of Family Relations' after considering delayed death reports, unidentified death age, etc.

○ Basic data

 - **(Number of deaths)** Number of the deaths of the nation and provinces by sex and age group in 2020

 - **(Base population)** Mid-year population of the nation and provinces by sex and age group in 2020

 - **(Remaining healthy life expectancy)** 'Life Tables for Korea, 2020', '2020 Social Survey' (disease period, self-assessment of health)

 - **(OECD data)** "Life expectancy."OECD.Stat.OECD,2021.11.(stats.oecd.org)

 - **(Eurostat data)** "Healthy Life Years." Eurostat.European Commission, 2021. 11. (ec.europa.eu/eurostat)

○ Data dissemination

 - (Press releases) KOSTAT website (kostat.go.kr)

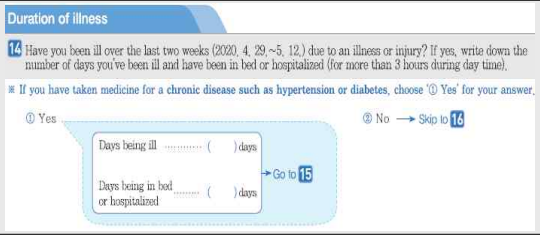 - (Statistical data) KOSIS website (kosis.kr)

## ☐ Note

○ The total may not be inconsistent with the sum of details due to rounding.

○ Data update years of OECD member countries for international comparison are not the same.

○ The concept of 'Percentage of disease-free days' of Eurostat is partially different from that of KOSTAT.

 - (Eurostat) Percentage of days when a person doesn't suffer from any health problems

 - (KOSTAT) Percentage of days when a person doesn't suffer from a disease or an accident

# Appendix

## Statistical terms

○ **Average remaining life expectancy [$e_x^0$]**

- Remaining life expectancy indicates to what age a person of a specific age ($x$) would live on average.
- Life expectancy is an average time a person is expected to live, based on the year of birth.

○ **Probability of dying [$_nq_x$]**

- A probability that a person of a specific age ($x$) would die without living to the next age ($x+n$).

○ **Probability of surviving**

- A probability that a person of a specific age would live to an another particular age

○ **Probability of dying from a specific cause of death [$R_x(i)$]**

- A probability that a person of a specific age ($x$) would eventually die from a specific cause of death ($i$)

○ **Gain in remaining life expectancy when eliminating a specific cause of death [$e_x^0(-i) - e_x^0$]**

- A gain in remaining life expectancy when a person would die from another cause of death without dying from a specific cause of death ($i$)

## How to estimate remaining healthy life expectancy

| Concept | Remaining disease-free life expectancy | Remaining life expectancy in good self-perceived health |
|---|---|---|
| Meaning | (Remaining) life expectancy (at birth) when eliminating the period of suffering from a disease or disability | Period in good self-perceived health among the total (remaining) life expectancy |
| Basic data | 2020 Social Survey (Disease period) | 2020 Social Survey (Self-assessment of Health) |
| Survey item |  |  |
| Equation | $$E_x' = \frac{1}{l_x} \sum_{i=x}^{w} (L_i \times (1 - \pi_i))$$ | - $x$ : age, $w$ : Number of age groups, $i$ : Group of age $x$<br>- $L_i$ : Stationary population of age group $i$<br>- $\pi_i$ : Disability prevalence of age group $i$<br>- $l_x$ : Number of survivors of age $x$ |
| Disability prevalence | Average of the percentage of days in sick in 2 weeks | Share of people who think their health "bad" or "very bad" |