

Health Issues

Mankind today is probably healthier than ever. This is due to improved preventive care, better hygiene, widespread information and medical progress. Meanwhile there are new impending threats. Can human health improve endlessly ?

1. Obesity and other non-communicable diseases

1.1. Obesity in the United States and in the UK

According to the World Health Organisation (WHO), non-communicable diseases, i.e. heart diseases, diabetes, cancer and chronic lung diseases, will take a heavy toll in the next decades if unaddressed. NCDs are driven by several factors : alcohol and tobacco consumption, increasingly sedentary and unhealthy lifestyles, as well as poor air quality.

In the USA, diet-induced diseases have been particularly in the spotlight due to staggering obesity rates. The WHO estimates that 36% of adults in the USA are obese, putting America among the most overweight countries in the world. The United Kingdom is trailing closely behind with nearly 1 in 4 adults and 1 in 5 children suffering from obesity. The figure has doubled since the 1980s, tallying with a surge of Type 2 diabetes.

Scientific studies highlight sugary drinks and processed food as aggravating factors of this situation. Several high-profile celebrities embarked on a crusade to raise awareness of the problem. For example TV chef Jamie Oliver launched a « Feed Me Better » campaign in 2005 to improve schoolchildren's diet by providing wholesome menus in school canteens and calling for the introduction of cooking lessons in the national curriculum (it has been the case since 2015). Likewise, Michelle Obama, the former American First Lady, capitalized on her popularity when she became a figurehead of the 2009 Let's Move Programme dedicated to solving the problem of child obesity in the USA.

It is hoped that both these initiatives will trigger a shift in attitudes and turn the tide against the alarming trend of childhood obesity. In the USA, awareness campaigns have yielded encouraging results as the hike in childhood obesity seems to have stalled.

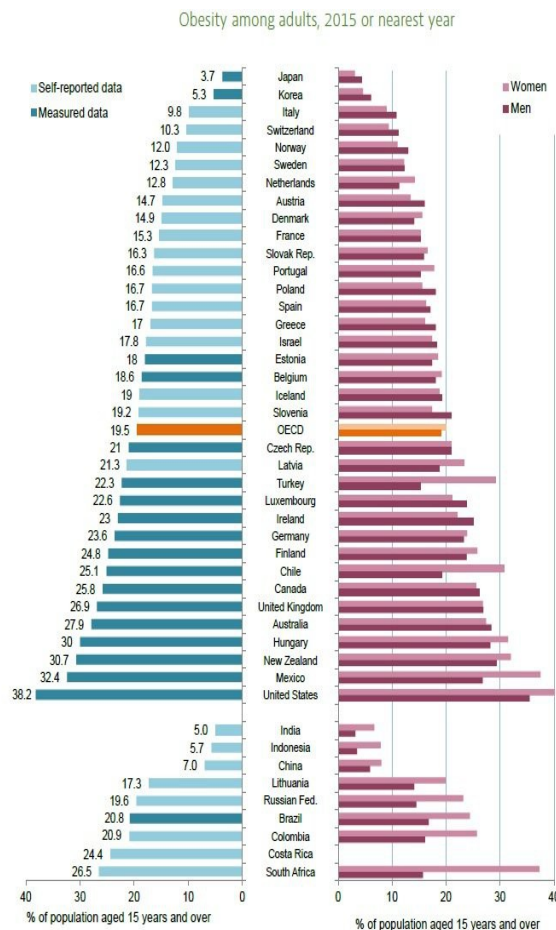
Homework : Find other examples of programmes to struggle against obesity and/or child obesity in the USA, UK, Canada, Australia, New Zealand...

Governments are contemplating drastic steps to tackle the problem of obesity. For example, the British government has introduced a sugar tax on soft drinks in 2018. The aim of the Soft Drinks Industry Levy is to encourage companies to reformulate their soft drinks. If they don't, they have to pay a levy (from 18 pence to 24 pence per litre of drink). Even before coming into effect, the levy was already working – over 50% of manufacturers have reformulated their drinks (that's the equivalent of 45 million kg of sugar every year). Soft drinks manufacturers who don't reformulate will pay the levy, which is expected to raise £240 million each year. All revenues raised through the levy will directly fund new sports facilities in schools as well as healthy breakfast clubs, ensuring children lead healthier lives.

1.2. Obesity in the world

In the OECD, more than one adult out of two is overweight or obese and one in six children. The forecasts for 2030 are pessimistic and anticipate a surge in the number of obese people. Socio-economic inequalities play a huge role, especially for women.

The following graph shows obesity rates (Mass Body Index > 30 kg.m⁻²). The average for the OECD countries is 19.5%. The United States (38.2%), Mexico (32%), New Zealand (30.7%), and Hungary (30%) are the hardest hit. Japan (3.7%), Korea (5.3%), New Zealand (30.7%), and Hungary (30%) are the hardest hit. Japan (3.7%), Korea (5.3%), Italy (9.8%) and Switzerland (10.3%) are the less affected. France's rate of obesity is 15.3% (OECD measure).

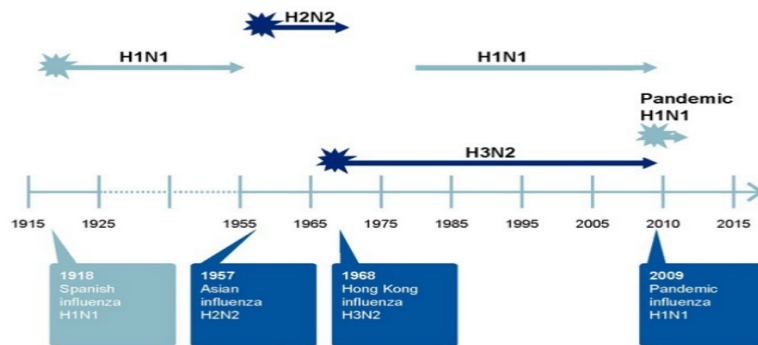


Source: OECD (2017), OECD Health Statistics 2017 (Forthcoming in June 2017).
www.oecd.org/health/health-data.htm
 Note: The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

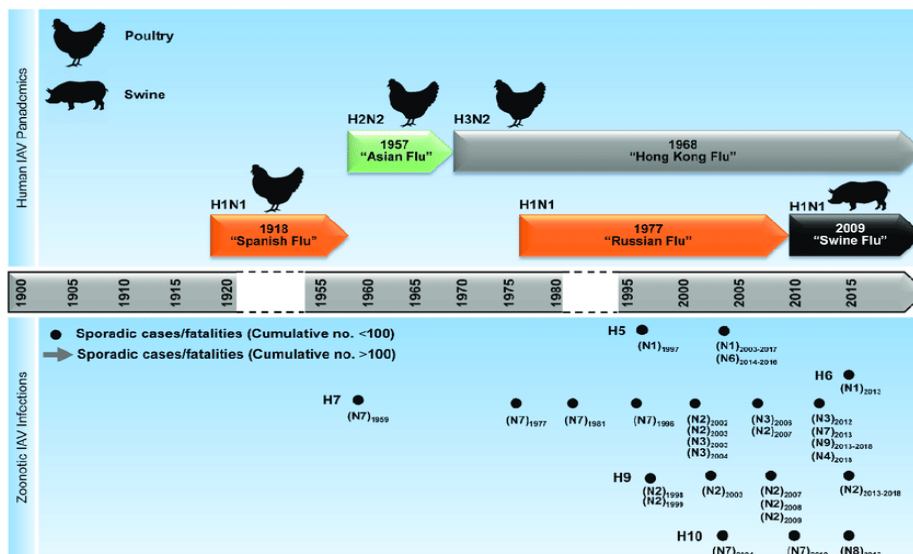
2. Epidemics

Pandemics are not new, but the different viruses which cause epidemics are more or less dangerous. The most recent pandemic due to Coronavirus (Covid-19) has put into highlight the weaknesses of our globalised world. In less than three months, the virus has brought the planet to a halt and led to a health crisis as well as a social, economic and financial crisis. No country was ready to face such a large-scale disaster.

2.1. Pandemics in the 20th century



Some epidemics, like the seasonal flu, are rather usual. Others are less predictable and often more virulent, like the so-called « Spanish flu » (or 1918 Influenza Epidemic) in 1918-1920, the Asia flu in 1957, the Hong Kong flu in 1968, the H5N1 (1998, 2003, 2018), the SARS in 2002 and the H1N1 flu in 2009-2010



Les pandémies de grippe des temps modernes (1)

Année	Dénomination	Localisation	Nombre de décès	Taux de reproduction (Ro)	Létalité
1918-1920	Grippe espagnole	France, Etats-Unis	20 à 40 millions (2)	-	-
1957	Grippe asiatique	Chine	2 millions	-	-
1968	Grippe de Hong Kong	Chine	4 millions	-	-
1977	Grippe russe A(H1N1)	-	Chiffre inconnu	-	-
1997 puis 2003 et 2018	Grippe aviaire (H5N1)	Hong Kong et Chine	400	1,3 à 1,6	<0,2%
2002	Syndrome respiratoire aigu sévère (SRAS)	Chine	440	1,5	<0,2%
2009-2010	Virus A(H1N1)	Mexique	18 500 confirmés (3)	1,5 à 1,8	2 à 3%

(1) 20^{ème} et 21^{ème} siècle.

(2) 80 à 100 millions selon des évaluations récentes

(3) Estimation finale entre 151 700 décès et 575 400 décès

The other epidemic which has put its mark on the last decades of the 20th century is the AIDS epidemic. According to UNAIDS, the disease has caused the death of 32 millions of people since 1981. In 2018, 770,000 people died of AIDS-related diseases. The AIDS virus affects the immune system and makes patients vulnerable to infections and diseases. Today, about 25 million contaminated people have access to antiretroviral treatments which slow down the disease and lower the risk of contamination. However there is still no vaccine to this day and the use of a condom is the best means of prevention in many cases.

2.2. 21st century epidemics

- Ebola

This particularly dangerous virus was rife in South Africa between 2013 and 2016, before reappearing briefly in 2018. Around 11,300 people died of the disease. Ebola was first observed in 1976. It caused cases of hemorrhagic fever in Western African countries like Guinea, Sierra Leone and Liberia. Even though it is less contagious than other viral diseases, it is considered as very dangerous due to the high death rate (about 40%). The virus reappeared in 2018 in the Democratic Republic of Congo where it caused 2,200 deaths.

- the H1N1 influenza

H1N1 appeared in Mexico in spring 2009. First called the « Swine flu », the virus was less dangerous than what was expected for humans, and vaccination campaigns have allowed to stop it from spreading. The consequences of the H1N1 virus are much debated. According to the WHO,

the virus caused the death of 18,500 people. The medical journal « *The Lancet* » estimates it caused between 151 700 and 575 400 deaths.

- Le SRAS

The Severe Accute Respiratory Syndrom or SARS appeared in China at the end of 2002. Over the next few months, the illness spread to more than two dozen countries in North America, South America, Europe, and Asia before the SARS global outbreak of 2003 was contained. Phylogenetic analysis of these viruses indicated a high probability that SARS coronavirus originated in bats and spread to humans either directly or through animals held in Chinese markets. The bats did not show any visible signs of disease, but are the likely natural reservoirs of SARS-like coronaviruses. In 2004, scientists from the Chinese Centre for Disease Control and Prevention of the University of Hong Kong and the Ghanzhou Centre for Disease Control and Prevention established a genetic link between the SARS coronavirus appearing in civets and humans, confirming claims that the virus had jumped across species. SARS is highly catching and causes cases of pneumonia which can be lethal. The virus affected more than thirty countries and 440 people died. Hong Kong and China were the hardest hit with 80% of the total death toll. The mortality rate measured was 9.5%.

- The avian flu

The avian flu first decimated poultry farms in Hong Kong and China before transmitting to humans and causing a psychosis around the world. It is responsible for a rather limited number of human deaths since only 400 were listed.

2.3. The Covid-19/ SARS-COV 2 pandemic

The **COVID-19 pandemic**, also known as the **coronavirus pandemic**, is an ongoing global pandemic of coronavirus disease 2019 (COVID-19), which is caused by severe acute respiratory syndrome coronavirus 2(SARS-CoV-2). The virus was first identified in December 2019 in Wuhan, China. The WHO declared a Public Health Emergency of International Concern on 30 January 2020, and later declared a pandemic on 11 March 2020. As of 29 June 2021, more than 181 million cases have been confirmed, with more than 3.92 million confirmed deaths attributed to COVID-19, making it one of the deadliest pandemics in history.

The severity of COVID-19 symptoms is highly variable, ranging from unnoticeable to life-threatening. Severe illness is more likely in elderly COVID-19 patients, as well as those who have underlying medical conditions. COVID-19 transmits when people breathe in air contaminated by droplets and small airborne particles. The risk of breathing these in is highest when people are in close proximity, but they can be inhaled over longer distances, particularly indoors. Transmission can also occur if splashed or sprayed with contaminated fluids, in the eyes, nose or mouth, and, rarely, via contaminated surfaces. People remain contagious for up to 20 days, and can spread the virus even if they do not develop any symptoms.

Recommended preventive measures include social distancing, wearing face masks in public, ventilation and air-filtering, hand washing, covering one's mouth when sneezing or coughing, disinfecting surfaces, and monitoring and self-isolation for people exposed or symptomatic. Several vaccines have been developed and widely distributed in most developed countries since December 2020. Current treatments focus on addressing symptoms, but work is underway to develop medications that inhibit the virus. Authorities worldwide have responded by implementing travel restrictions, lockdowns and quarantines, workplace hazard controls, and business closures. Numerous jurisdictions have also worked to increase testing capacity and trace contacts race of the infected.

The epidemic was first viewed with scepticism by Western countries, which sometimes failed to consider the threat as a serious one. Countries which reacted rapidly often obtained better results in curbing infection rates, with less contaminations and less crowded hospitals.

The health crisis mainly results from overloaded medical services, especially in serious cases requiring ventilators and special equipments. The other factor is the virus' high contagiousness. Shortages of medical equipment like facemasks or ventilators have forced governments to react quickly and have shown how dependent of Chinese exports European countries were.

The pandemic has resulted in severe global, social and economic disruption, including the largest global recession since the Great Depression of the 1930s. It has led to widespread supply shortages exacerbated by panic buying, agricultural disruption, and food shortages. However, there have also been decreased emissions of pollutants and greenhouse gases. Numerous educational institutions and public areas have been partially or fully closed, and many events have been cancelled or postponed. Misinformation has circulated through social media and mass media, and political tensions have been exacerbated. The pandemic has raised issues of racial and geographic discrimination, health equity, wealth inequality and the balance between public health imperatives and individual rights.

This pandemic was however not completely unforeseen since the WHO had decided to focus its research on emerging diseases likely to become pandemics as early as the 2000s¹. It had been working on prevention but also on getting ready to react in the advent of a pandemic. The WHO has warned of the likelihood of a serious pandemic since 2003 and has asked countries to create national committees to deal with pandemics. According to Mediapart, the 2005 avian influenza was a decisive moment.

Homework : Research the long-term side effects of the disease (« *Long Covid* »).

3. Les autres défis en matière de santé

a) Ageing (the Silver Revolution)

According to a 2013 UN study, population ageing is a global phenomenon resulting from a widespread drop in fertility rates and longer life expectancy. The number of over 60s will have doubled by 2050 while the number of the « oldest old » (over 80s) will triple. According to some estimates, life expectancy is expected to reach the milestone of a hundred years by 2057. But the other side of the coin is that age-related conditions such as dementia, Alzheimer's disease, loss of mobility due to joint problems, visual and hearing impairment and dependency will become more prevalent. All these downsides of the « greying » of the population will undoubtedly put further strain on health budgets and pension systems.

The UN study report highlighted the pension crisis caused by a falling dependency ratio (number of workers vs. retirees) putting stress on state finances as spending on pensions and healthcare for the elderly outstrips taxes. One solution to this dilemma is immigration, itself a controversial issue.

Despite being widely considered problematic, putting pressure on state resources like healthcare and social services, a higher percentage of over 60s may actually be a boon. Some employers are starting to view the over 60s as a talent pool. They have stores of expertise, creativity, experience and skills that are transferable to younger generations. Retirees are increasingly financially independent, living either alone or with their spouse and continuing to provide emotional, financial and practical help to their families.

Thanks to medical progress, people are living a longer, healthier life. Despite a rise in age-related

¹ The 2000s : the « noughties ».

illnesses like type 2 diabetes, cardiovascular disease and certain cancers, doctors are learning to prevent and cure them. Thus pensioners are healthier for longer and are active grandparents ; they provide love and support as well as childcare, free of charge, while parents are at work. They take up volunteer positions, playing a vital role in communities and also contribute economically as they participate in tourism, culture and leisure activities. Longevity also creates jobs in healthcare and the social care industry, thus boosting the economy.

So what future for our ageing world ? It goes without saying the pension reform and improvements in caring for the elderly are vital. However, with many over 60s preferring to remain in their own homes, care needs to be shaped around them. Chairlifts and alert buttons are already commonly used but the technology industry is developing the « smart home » with the elderly specifically in mind. Smart homes provide electronic conveniences and security, using automated systems to provide better quality of living. Such systems can already control temperature, lighting, multi-media, and even doors. They can monitor health, administer medication and alert family or medical services in case of problems. We are witnessing the evolution of domestic robots, such as vacuum cleaners, to assist with household tasks.

The global population may be ageing but reforms and innovations ensure that we will be able to make the most of our sunset years.

May 31st 2021 : China has allowed families to have a third child, as the country faces an increasingly aging population. The longstanding one-child policy was abandoned in 2016.

The move is aimed at tackling the country's demographic problem. China ended its decades-old one-child policy, which was designed to control population growth, in October 2015. Starting from 2016, couples were allowed to have two children.

According to the World Health Organization, due to the longer life expectancy and declining birth rates, people over the age of 60 are projected to make up 28% of China's population by 2040. This dynamic hinders the growth of the economy and poses a challenge to the public health system.

The country has also been plagued with a huge gender imbalance, with the number of men exceeding women by more than 30 million, according to China's National Bureau of Statistics. Peng Xizhe, the director of the Fudan University Center for Population and Development Policy Studies, told the Global Times last year that it will take "about 50 to 60 years" to resolve the imbalance.

Last year's once-in-a-decade census revealed that China's population reached 1.41 billion. But the growth rate over the past 10 years was lower than between 2000 and 2010, and the lowest since the 1960s.

From rt.com consulted June 2021

b) The environmental threat

Environmental issues may cause serious health threats. Cancers and endocrinal conditions, which are suspected of being caused by chemicals claim thousand of lives every year in the UK and phthalates and bisphenols have come under scrutiny for their supposed side effects. In addition, a study by the MIT revealed that air pollution causes 200,000 deaths every year in the USA. These problems will probably escalate in the future but the stakes may be even higher regarding climate. Global warming may upset rain patterns and temperatures and change the local distribution of local diseases such as malaria. Thus epidemics could occur in temperate countries which had been spared until then. Pundits forecast that with rising temperatures, Aedes mosquitoes, responsible for spreading Zika in South America, might colonize larger swathes of the USA. The disease causes few or no symptoms in most patients but is a serious threat for pregnant women, whose babies can suffer from birth defects owing to microcephaly. Unfortunately scientists have not discovered any vaccine yet. Fears of a

Zika outbreaks rekindled the debate about late abortion in the USA, as the babies' contamination can only be diagnosed in the third trimester of pregnancy, that is to say when it is no longer legal to have an abortion in most American states. This situation leaves women no choice but to consider early abortions without knowing if their babies will actually suffer disabilities.

4. Prevention vs. Nanny State

The balance between people's private responsibilities and the duty of the state to protect its citizens is often precarious. Indeed, it is in the interest of a state to ensure its citizens are as healthy as possible, not only for their own sake but also because poor health, supposedly caused by irresponsible attitudes, weighs on hospital resources and hence government spending.

That's why governments often initiate prevention policies. Awareness campaigns such as graphic ads and other anti-smoking action are estimated to have saved roughly 8 million Americans since a 1964 report revealed smoking was linked to cancer. Prevention seems to pay off, for the number of smokers in the USA reached an all-time low last year : only 15% of the population is addicted to tobacco, according to a Food and Drugs Administration report.

Governmental campaigns, albeit yielding encouraging results, are sometimes decried for being an infringement onto people's freedom of choice. In that context, the derogatory nickname « nanny state » is used to describe the government's excessive efforts to interfere in people's private sphere of responsibility, for example by providing excessive advice or enforcing laws pertaining to drinking, smoking or eating.

Such governmental meddling into citizen's private affairs is generally unpopular both in the USA and in the UK. In January 2016, the British government issued guidelines recommending Britons cut down their consumption but the campaign backfired : the population and the media lambasted so called health zealots for trying to overregulate citizens' private lives. Yet these guidelines were only recommendations without any coercive aspect.

This shows how sensitive citizens can be regarding government intervention in the field of health. Health regulations are sometimes stonewalled by the powerful food industry's lobbies.

In 2013, New York State tried to implement a « soda ban », whose avowed goal was to stamp out the use of 16-ounce containers for soft drinks in fast food restaurants but the measure was overturned by the NY Court of Appeal for overstepping the Board's prerogatives.

Problématiques associées :

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|--|---|
| • le lobbying de l'industrie agro-alimentaire | • réchauffement climatique et maladies tropicales |
| • l'industrie agro-alimentaire : méthodes et scandales | • mondialisation et pandémies |
| • le lobbying dans les pays du Sud | • Perturbateurs endocriniens et infertilité humaine |
| • les systèmes de santé : forces et faiblesses | • prévention vs. précaution |
| • le vieillissement : un marché pour les entreprises ? (industrie pharmaceutique, IoT) | • le principe de précaution |
| • Les systèmes de retraite | • La sécurité alimentaire |
| • La quête de l'immortalité ou de l'humain transformé | • la faim dans le monde |
| | • Végétarisme, véganisme... |

Documentaries :

- | | |
|--|---------------------------------------|
| • +++ Globesity : Fat's new frontier ; | • +++ Le Monde selon Monsanto, 2008 ; |
| • Seeds of Death (GMOs), | • +++ Food, Inc, 2008 ; |

- We feed the World ;
- ++ Supersize Me, 2004 ;//That sugar film, 2014 ;
- Fast Food Babies, 2011 ;
- Fast Food Nation ;
- Hungry for change, 2012 ;
- Tapped, 2009 ;
- The Price of Sugar, 2007 ;
- What the Health, 2017 ;
- Forks over knives, 2011 ;
- Sugar Coated, 2015 ;
- Hungry for Change, 2012 ;
- Food Matters, 2008 ;
- King Corn, 2008 ;
- GMO OMG, 2013.