

## Industrial Britain (1750-1900)

### An industrial town



#### Five common diseases in the Early Industrial period

TB (Tuberculosis)	Spread in droplets of water from coughing. Attacked the lungs and made people cough up blood.
Influenza	Transmitted through coughing and sneezing. Caused fever, shivering, headaches and vomiting. There were regular flu outbreaks in the 19 <sup>th</sup> century.
Diphtheria	Spread through coughing and sneezing. Transmitted through contact with infected clothes. Mostly affected children, causing swollen glands, fever, headaches.
Typhoid	Spread through food and water contaminated with human waste. Also carried by infected flies. Caused fever, headaches and diarrhoea.
Typhus	Transmitted by bites from body lice. Thrived in overcrowded neighbourhoods.

#### Living conditions

##### Housing

Lodging houses were where newly-arrived families stayed when looking for houses. They were divided into rooms. Many were filthy and over-crowded. Disease spread quickly. Many made do with back-to-back housing, made to pack in as many houses as possible. Some families had one room downstairs and one upstairs. Hard to ventilate and people suffered from chest infections and TB. Some couldn't afford a back-to-back. They crowded in the cellars of other people's houses.

##### Food

Many workers couldn't afford sufficient food, particularly when there were children to feed. Poor families lived on bread, butter, potatoes and tea. Many were malnourished. The quality was also an issue. Not until the 1860s was food canned. Fridges weren't invented until the 1880s. The government didn't control the production and sale of food, so food eaten by the poor was adulterated: butchers sold meat from diseased animals at cheap prices; cows' milk was adulterated with water and chalk; butter was adulterated with copper to improve its colour. This meant people suffered from diarrhoea and food poisoning.

##### Water

In working class areas it was rare to have piped water. In poorer areas, whole streets shared a water pump. Often landlords paid only a small sum to the water companies for basic provision. Water might only be available for 2-3 hours a day. In some places, people had to get water from a river. All water supplies were dirty. Water companies frequently pumped water from polluted rivers. Springs, streams and ponds were impure. Middle class families filtered their water but this wasn't an option for poorer families. In the summer months, when the water was dirtiest, typhoid took many lives.

##### Waste

Sewers were built to drain rain, not excrement. New housing rarely had sewers, so water filled the streets and courts. People carried on using privies. In some cases more than ten families shared a privy. Cesspools were emptied by 'night soil men' who scooped out sewerage, loaded a cart and sold it. When landlords didn't pay for night soil men, the cesspits overflowed. If a leaking cesspit was close to a well or pump, it could be fatal. The situation reached a crisis point when middle and upper class people started to use water closets (flushing toilets). Between 1800 and 1830, they were emptied into sewers which emptied into rivers that companies got their water from.

#### Edwin Chadwick and the 1848 Public Health Act

Chadwick thought that poverty was the main cause of ill health, and this came from people's living conditions. Edwin Chadwick's 1842 report on *The Sanitary Conditions of the Labouring Population of Britain* made the government change the poverty that many workers lived in. The report was based on evidence from doctors and officials all over the country. Chadwick suggested that a national public health authority be set up which forced local councils to improve the public health by providing a sewerage system. The government's *laissez-faire* attitude was being challenged. Water company bosses didn't like Chadwick's proposals because they thought they might make them less money, and ratepayers (local tax payers) didn't like Chadwick's proposals because they didn't want to pay more tax.

#### Cholera

##### Symptoms

Cholera was a terrifying disease that killed quickly. Infected people immediately suffered vomiting and cramps. Diarrhoea caused them to produce a yellowish watery liquid. The body dehydrated, the pulse weakened and the skin turned blue. Victims were often dead in 1-2 days.

##### **1832 outbreak – Leeds**

Cholera reached Leeds on 28 May 1832. The first to die was a two-year-old, the son of an Irish weaver. The family lived in a cramped, dirty yard. The houses were built next to a stinking stream. Within a few days, several people in the same yard had died. By the end of July, there had been 427 cases and 187 people had died. Most victims lived in overcrowded yards. By the end of 1832, 702 people in Leeds had died of cholera. Across Britain, the disease killed around 32,000 people.

##### **The work of Dr Baker**

Doctor Robert Baker studied the cholera outbreak in Leeds. He recorded each case and mapped the spread of the disease. Although he believed in miasma he made the link between poor living conditions and disease. People like Edwin Chadwick continued to make the link between dirt and disease which led to 1848 Public Health Act which encouraged councils to clean up towns.

##### **Beliefs and responses**

Some vicars preached that cholera was a punishment for people's sins. Some doctors believed cholera was contagious and transmitted by touch. The most common believed cause was miasma. In November 1862, the government set up the Central Board of Health. It included two doctors who were sent to St. Petersburg to study the disease in Russia. Towns were encouraged to set up local boards of health. These groups relied on donations. They employed inspectors to monitor outbreaks of cholera and printed posters advising people. Some boards of health tried to get rid of bad air by burning barrels of tar in the streets. In some towns, chloride of lime was added to the sewers to make them smell better. In Leeds in 1832, the Board of Health advised people to wash at least one a week, ventilate their houses and avoid drinking alcohol.

The government sought God's help with a national day of fasting, humiliation and prayer on 2 March 1832. Cholera hospitals were set up so victims could be isolated. Some local authorities imposed a quarantine and posted constables on the outskirts of town to turn away poor people trying to enter.

#### Joseph Bazalgette and London's sewers

Bazalgette began his career as a railway engineer. In 1855, the Metropolitan Board of Works was founded and Bazalgette was chief engineer. He was tasked with building sewers to stop waste going into the Thames. In 1858, The Great Stink meant that the government ordered Bazalgette to clean up the river. He designed a new sewerage system; 82 miles of sewers running east to west, three to the north and two to the south. Smaller sewers would take people's waste from their homes to the main sewers. Waste was dumped in the downstream part of the river to the east. Pumping stations on each bank of the river pumped sewage into reservoirs which emptied into the river. It took seven years to build, nearly 1,300 miles of sewers were constructed. He made wide sewers, which still cope with London's sewage today. On 4 April 1865, the Prince of Wales opened the sewerage system. It prevented the spread of diseases like cholera and typhoid, even if people still believed in miasma.

### TIMELINE OF MAJOR EVENTS

<b>1831-2</b> Cholera epidemic in Industrial Britain.	<b>1842</b> Chadwick published a report which suggested a public health authority be set up.	<b>1848</b> The Public Health Act was passed. It <i>allowed</i> authorities to clean towns but didn't <i>force</i> them.	<b>1854</b> John Snow linked cholera to infected water.	<b>1858</b> The Great Stink urged MPs into taking action.	<b>1860</b> The Pure Food Act was passed to stop food being adulterated.	<b>1861</b> Louis Pasteur discovered that germs caused disease.	<b>1865</b> The new sewers, designed by Joseph Bazalgette, were opened.	<b>1867</b> Working-class men got the vote.	<b>1875</b> Public Health Act <i>forced</i> councils to clean up.
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