



# INFLUENZA


What you need to know

**3-5 million cases annually**

## What is influenza?

Influenza, or “flu”, is one of the most common, yet serious, infectious diseases.<sup>1</sup> Caused by the flu virus, it is responsible for 3 to 5 million cases of severe disease, millions of hospitalisations and up to 650,000 deaths worldwide every year.<sup>2,3</sup> Widespread outbreaks of the disease in a community at a particular time, known as epidemics, generally occur during the respective winter seasons.<sup>4</sup>

**Northern hemisphere:**  
Flu epidemics occur  
October to May



**Southern hemisphere:**  
Flu epidemics occur  
April to September

The flu virus is divided into four types: influenza A, B, C and D, with the influenza A and B viruses responsible for seasonal epidemics.<sup>2,5</sup> New flu viruses can arise as a result of contact with the animal population or as mutations are introduced during viral replication.<sup>6</sup>

Misinformation and inappropriate advice are common when it comes to dealing with flu.<sup>7</sup> The impact of flu is often underestimated, with several studies revealing a lack of awareness among healthcare workers of the risks posed by the disease.<sup>8,9</sup> The majority of patients do not seek medical advice quickly enough for antiviral treatment to be most effective.<sup>10,11</sup> Without timely, appropriate treatment, flu can lead to pneumonia, bronchitis, sinus infections, hospitalisation or even death. It can also worsen long-term health problems such as asthma and heart failure.<sup>12</sup>

## What is the burden of flu?



Flu is considered a significant global health concern that can cause severe illness and death.<sup>1</sup> Flu can also take a considerable economic toll through days lost at work and strained health services.<sup>1,2,4,13</sup>

A study looking at the impact of flu on workplace absences reported that, in industrialised countries, up to 61 million workdays are lost due to flu every year, and the average number of working days lost per episode of physician-diagnosed flu ranges from 3.7 to 5.9 days.<sup>14,15</sup> The total estimated cost of a typical seasonal flu epidemic in industrialised countries may reach \$63 million per million of the population.<sup>16</sup> In the USA alone, the total economic burden of flu was estimated to be \$87.1 billion annually.<sup>17</sup>

## How is flu spread?



Flu viral particles spread easily from person to person through the air droplets and small particles excreted when someone with the disease coughs or sneezes.<sup>2,18</sup> Some spread can also occur via direct contact with infected individuals or contaminated surfaces.<sup>2,18</sup> When one person in a family has flu, 38% of the household is likely to catch the virus from them.<sup>19</sup>

Flu can last up to eight days and most adults are contagious one day before their symptoms start, and remain contagious up to seven days after becoming sick. Some children and those with weakened immune systems, however, may be contagious for longer periods of time.<sup>18,20,21</sup>

Therefore, early treatment is important for limiting the spread of flu.

## Who is affected by flu?

People of all ages can be affected by flu, and it can be deadly for those who are vulnerable to complications, such as:<sup>22,23,24</sup>



Pregnant women



Adults aged 65 years or older



Individuals with weakened immune systems due to disease or medication (such as those with HIV or AIDS, or those being treated with steroids)



Children younger than five years old



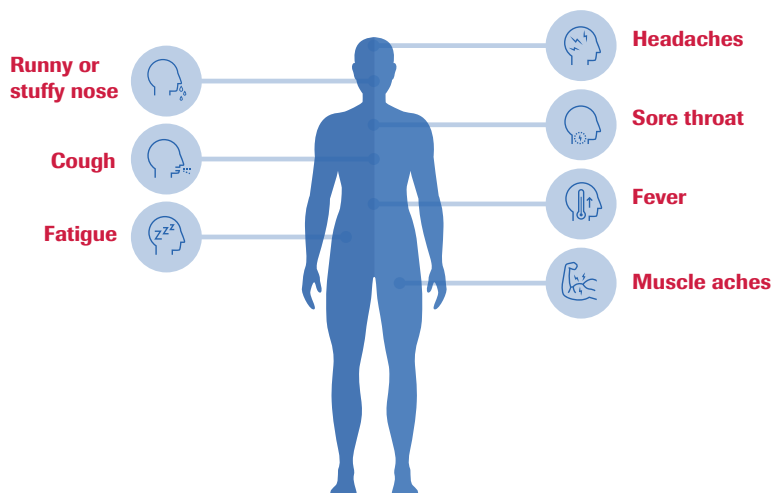
Individuals with chronic medical conditions such as long-term heart, respiratory (e.g. asthma), kidney or liver disease



Healthcare workers due to increased exposure to patients

## What are the signs and symptoms of flu?

Flu symptoms generally appear quickly, usually within 24–48 hours of infection, and can last up to eight days.<sup>18</sup> The most common symptoms are:<sup>2,18</sup>



Some people may experience vomiting and diarrhoea, but this is more common in young children.<sup>21</sup>

Infection can cause mild to severe illness and can be fatal in some cases, with pneumonia being the leading cause of severe illness and death among those infected.<sup>2,24</sup> Complications from infection can involve a number of tissues and organs, including the brain, heart and muscles, but the respiratory system is most frequently affected.<sup>21</sup>

## How is flu diagnosed?

Flu can be easily confused with other respiratory illnesses such as the common cold, because some milder symptoms are similar and currently available diagnostic tests vary in accuracy.<sup>25</sup> However, flu is also characterised by more severe symptoms affecting the whole body (systemic), like fever, muscle pain and generally feeling unwell. It is therefore important that anyone suspected of having flu seeks timely medical attention.<sup>18,25</sup>

## How is flu treated?

Guidelines suggest flu should be managed through vaccinations, preventive treatment (prophylaxis) and antivirals.<sup>26</sup> 'Cold and flu' treatments available from the pharmacy can only alleviate some of the symptoms of flu, whereas antivirals act on the flu life cycle.<sup>27</sup>



### Vaccines

Seasonal flu vaccines are key for flu prevention.<sup>28</sup> However, they demonstrate variable rates of effectiveness due to often low uptake and mismatches between the vaccine and circulating flu virus strains.<sup>29</sup> For example, between 2005 and 2018, estimates for the overall effectiveness of seasonal flu vaccines ranged from 10% to 60%.<sup>29</sup>

### Antivirals

Several antiviral medicines are currently available worldwide for the treatment and prophylaxis of flu.<sup>26</sup> Flu antivirals have been shown to shorten the duration of flu symptoms and reduce the risk of severe illness and death – with the greatest benefit noted when antiviral treatment is administered as soon as possible after illness onset – however they may have limitations with respect to efficacy, convenience of dosing and resistance.<sup>2,25,26,30</sup>



## Are we prepared for a flu pandemic?

A flu pandemic is a global outbreak of a new influenza A virus that affects very large numbers of people and can happen at any time.<sup>31</sup> The impact and severity of pandemics tend to be high because most of the population have not been exposed to the strain of the virus and so do not have any pre-existing immunity to it, and seasonal flu vaccines are not designed to protect against a pandemic virus.<sup>32</sup> The World Bank estimates that a flu pandemic could kill 71 million people worldwide and infect hundreds of millions.<sup>33</sup>



Vaccines are critical for pandemic treatment. However, due to the lag time in developing a new vaccine specific to a pandemic strain, the only disease-modifying defence available at the beginning of a pandemic is antiviral treatment.<sup>34,35,36</sup>

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