# Infection hazards of dead bodies

**Introduction**

Living persons with communicable diseases are generally thought to pose a greater risk of transmitting infection to others than the bodies of people who die with a communicable disease.

Most people have little, if any, contact with a dead body, except perhaps following the death of a family member or friend. However, some people may be exposed to infection hazards from contact with deceased who have died with a communicable disease. For example, some occupations have frequent and extensive contact with dead bodies, including pathologists and mortuary attendants, medical and nursing staff, embalmers and funeral directors, members of emergency services, and forensic scientists.

Except for a few communicable diseases, infected bodies can be safely embalmed, and viewed by the bereaved. The infectious hazards of dead bodies can be minimised by the use of appropriate infection control procedures.

**Infection risks from dead bodies**

*Table 1* lists communicable diseases that occur in New Zealand that could potentially be transmitted from a dead body. The diseases are categorised according to degree of risk, although the risk will likely depend on the procedures being performed on, or the type of contact with, the body. For each disease, *Table 1* also indicates whether the body needs to be transported in a body bag, and whether the body can be safely embalmed and viewed by the bereaved.

Tuberculosis, Hepatitis B and C, HIV/AIDS, Creutzfeldt-Jakob disease, meningococcal disease, and Group A streptococcal disease are considered to pose the greatest risks for those handling or in contact with recently dead bodies.

**Control of the infection risks**

Healthcare workers performing autopsies, embalmers, emergency service workers, and forensic scientists are the occupations considered most at risk. For example, skin penetration in the autopsy room can occur through contact with damaged bones and bone spicules, as well as sharp instruments. Needle stick injuries are common among embalmers.2

Healthcare facilities should have documented infection control procedures for their autopsy units, and for other services and staff handling dead bodies. These procedures should include the principles of universal precautions. Autopsy staff and embalmers should wear protective clothing, gloves, masks, and eyewear. Because of the risk of aerosolisation when power-driven tools are used, autopsy workers should wear respirators and work in rooms that have ultraviolet lights and negative air pressure.

Autopsy staff and embalmers should be vaccinated against hepatitis B. While vaccination against tuberculosis is available, this is not recommended because of the low effectiveness of BCG in adults. Even if vaccinated against tuberculosis, autopsy staff and embalmers should take appropriate precautions if working with any deceased who may have died with tuberculosis (or any other infectious disease).

It is very unlikely that meningococci would survive in a body, including the nasopharynx, for long after death, especially if the body is embalmed. Transmission of meningococci through hongi (pressing noses), kissing, or other close contact with the body is extremely unlikely. Therefore, there is no justification to alter customary practices at tangihanga when the deceased has died from meningococcal disease.

**Handling deceased who have died when infected with certain diseases**

When applying these guidelines, public health staff, funeral directors and others need to consider the views and concerns of the deceased’s friends and family and take these into account to the extent possible. Consultation and discussion with local iwi in regard tikanga and kawa practice is important.

***Table 1:*** *Guidelines for handling deceased with communicable diseases*

|  |  |  |  |
| --- | --- | --- | --- |
| **Infection and degree of risk** | **Bagging required1** | **Viewing safe 1** | **Embalming safe 1** |
| **Low risk** |  |  |  |
| Chicken pox/shingles | No | Yes | Yes |
| Influenza types (seasonal and non-seasonal) | No | Yes | Yes |
| Legionellosis | No | Yes | Yes |
| Leprosy | No | Yes | Yes |
| Measles | No | Yes | Yes |
| Meningitis (except meningococcal) | No | Yes | Yes |
| Methicillin-resistant staphylococcus aureus | No | Yes | Yes |
| Mumps | No | Yes | Yes |
| Psittacosis | No | Yes | Yes |
| Rubella | No | Yes | Yes |
| Tetanus | No | Yes | Yes |
| Whooping cough | No | Yes | Yes |
| **Medium risk** |  |  |  |
| Cholera | No | Yes | Yes |
| COVID-19 [see notes to table] | Yes4 | Yes4 | Yes2, 4 |
| Food poisoning | No | Yes | Yes |
| Diphtheria | Advisable | Yes | Yes2 |
| Hepatitis A | No | Yes | Yes |
| HIV/AIDS | Advisable | Yes | Yes2 |
| Leptospirosis | No | Yes | Yes |
| Malaria | No | Yes | Yes |
| Meningococcal disease | Advisable | Yes | Yes2 |
| Middle Eastern Respiratory Syndrome (MERS) | Yes | Yes | Yes2 |
| Severe Acute Respiratory Syndrome (SARS) | Yes | Yes | Yes2 |
| Scarlet fever | Advisable | Yes | Yes2 |
| Tuberculosis | Advisable | Yes | Yes |
| Typhoid fever | Advisable | Yes | Yes |
| Viral haemorrhagic fevers (not transmissible between people) | Advisable | Yes | Yes2 |
| **High risk** |  |  |  |
| Creutzfeldt-Jakob disease and other transmissible spongiform encephalopathies | Yes | Yes3 | No |
| Hepatitis B, C | Yes | Yes | Yes2 |
| Invasive Group A streptococcal disease | Yes | Yes | No |
| Viral haemorrhagic fevers (transmissible between people) | Yes | Yes | No |

1 Definitions

* Bagging: placing a body in an impervious plastic body bag.
* Viewing: bereaved seeing, touching, and spending time with the body. If the deceased has been bagged the bag must be left unopened and intact.
* Embalming: injecting chemical preservatives into the body to slow the process of decay.

2 Requires particular care during embalming. Embalming should be undertaken by a Registered Embalmer with a current Practicing Certificate from the New Zealand Embalmers Association. Having unqualified embalmers who do not hold a current practicing certificate increases the risk of mistakes being made.

3 Unless an autopsy has been performed, in which case viewing with no physical contact with the deceased (ie no touching or kissing the body) may be permitted.

4. For COVID-19 cases, see:

* General updates and advice:
* <https://covid19.govt.nz/>
* <https://www.tewhatuora.govt.nz/for-the-health-sector/covid-19-information-for-health-professionals/>
* <https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus>
* Advice on PPE:
* <https://www.tewhatuora.govt.nz/for-the-health-sector/covid-19-information-for-health-professionals/covid-19-information-for-all-health-professionals/covid-19-infection-prevention-and-control-recommendations-for-health-and-disability-care-workers/>

**Completing Death Documentation**

Funeral directors are asked to actively promote use of the online Death Documents Service to medical practitioners and nurse practitioners as a safe and efficient way of transferring death documents to funeral directors rather than practitioners, mortuary staff and funeral directors having to handle paper certificates of cause of death and cremation forms.

The Death Documents Service can be accessed here:

<https://deathdocs.services.govt.nz/welcome>

Assistance for practitioners to register to use Death Documents online is available on the Te Whatu Ora website at:

<https://www.tewhatuora.govt.nz/for-the-health-sector/health-sector-guidance/burial-and-cremation-act-1964/death-documents-project/>

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