

Dying a good death—what we need from drugs that are meant to end life

October 20 2017, by Betty Chaar And Sami Isaac



Credit: AI-generated image ([disclaimer](#))

Generally speaking, health care is aimed at relieving pain and suffering. This is also the motivation behind euthanasia – the ending of one's own life, usually in the case of terminal illness characterised by excruciating pain.

There has been [debate in Victoria](#) about the drugs that should be used to end life if euthanasia is legalised. So which medications can we ensure would facilitate the best, medically-supervised death?

Medicine as poison

When it comes to the question of which medicines can, or even are meant to, kill us, the most important thing to remember is the [old adage](#):

"The dose makes the poison."

This concept is one on which the whole discipline of toxicology and medicines is founded. This is the meaning of the well-known symbol of the snake, wound around the bowl of Hygeia (the Greek goddess of health), representing medicine, which you see in pharmacies and medical centres around the world. The intertwining of poison and [health care](#) is a longstanding concept in the therapeutic use of medicines.

This is a very intricate science, and the reason we conduct clinical research. We need to trial different doses of new drugs to meticulously establish a safe but effective threshold for use.

In more practical terms, this means too much of any medicine can cause harm. Take, for example, the humble paracetamol. When taken following correct guidelines, it is a perfectly safe, effective pain killer used by millions of people worldwide. But taken in excessive quantities, it can cause irreparable liver damage, and if the patient is not given an antidote in a hospital, could lead to death.

What drugs are used in assisted dying?

The group of drugs most commonly used to end life is called the

barbiturates. They cause the activity of the brain and nervous system to slow down. These drugs, used medicinally in small doses, can be taken short-term to treat insomnia, or seizures in emergencies. In different doses and administration techniques, these preparations can also be used as anaesthesia, to make us sleep through surgery.

An overdose of barbiturates is fatal. A large dose will effectively make the brain slow down to a point where it stops telling the body to keep the respiratory system working, and breathing ceases.

Both secobarbital capsules and pentobarbital (usually known as the brand name, Nembutal) liquid - (not to be mistaken for epilepsy medication phenobarbital) have been used either alone or in combination for physician-assisted suicide or euthanasia. They are also used in injectable forms for animal euthanasia.

These two products are [tried and tested](#), have the advantage of years of use with the benefit of knowing the exact dose range needed, and with few adverse effects reported (such as unexpected pain, drawn-out death or failed death).

Their safety and efficacy in inducing a peaceful, swift and uneventful death has been [proven around the world](#). They are the [preferred drugs](#) in the Netherlands, Belgium, Switzerland and some USA states where euthanasia is legal.

Other options exist, whether in combination or alone, but have limited evidence of use in euthanasia. Some drugs that cause excessive muscle relaxation and respiratory distress can end life, as can some pain killers commonly used in palliative care.

Drugs can also be used that fatally lower [blood sugar levels](#), cause heart attack, or block messages from the brain to the muscles, causing

paralysis.

While all of these drugs are legally available in Australia, they could cause a long, protracted [death](#), with many more side effects that could cause distress and suffering at the end of life. Nembutal and its relatives are less likely to do so, with greater evidence from international practices than any other drugs that can end life.

The 'best' death

In Australia, Nembutal and secobarbital can be used for animals, but are illegal for human use. This makes implementation of the newly proposed euthanasia law in Victoria slightly more difficult. The proposed legislation does not seek to legalise the use of Nembutal and its relatives - but suggests a "drug cocktail" be concocted by a compounding pharmacist.

The Victorian government has reportedly [approached Monash University's pharmacy department](#) to research the kind of pill that could be developed if the legislation passes. Therefore, no final description of this product has been released.

[Some have suggested](#) the mixture will be in powder form made with [pain killers](#) to induce a coma and eventually cause respiratory arrest. It may also use sedatives and muscle relaxants, a drug to slow down the heart, and an anti-epileptic to prevent seizure and induce relaxation of muscles. The constituents and doses are yet to be determined.

It's difficult at this early stage to predict how this concoction would work and whether it would be easier or safer to use than drugs already tried and tested. This proposed product would need to be tested and results compared, as all [new drugs](#) are.

What is needed is a [drug](#) or a mixture of drugs that produce a painless, relatively quick and peaceful passing. We do not wish to see further suffering in the form of seizures, prolonged distress and pain. If no solution is certain, it would be wise to fall back on simply legalising what is already tried and tested.

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