

# SUICIDE BY DROWNING IN IRELAND

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## Abstract

Over 400 persons commit suicide annually in Ireland out of which about 100 drown themselves. The causes of suicide are multi-factorial with mental illness and alcohol consumption major influences. Many suicides occur immediately after binge drinking sessions. One-third of all female and one-fifth of all male Irish suicide victims choose to drown themselves. There are a number of common features to suicide by drowning events including week-end nights, bridges over rivers, prior binge drinking and males between 15 and 35 years. Many suicides change their minds about killing themselves after they have entered the water so all that can be said about them with any certainty is that they deliberately entered the water. Potential rescuers are advised, among other things, not to enter the water until all land-based options have been ruled out and to consider not throwing away buoyant aids that are not recoverable and re-usable in a later swimming rescue. Eight would-be-rescuers in Ireland drowned between 2001 and 2006 and another six rescuers had to be saved themselves by police officers.

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## Introduction

Around one million people worldwide take their own lives annually<sup>1</sup> and this figure is most likely an underestimate for religious, cultural and humanitarian reasons. In Ireland 457 persons killed themselves in 2004, a suicide rate of 10.2 per 100,000 population, ranking the country 18<sup>th</sup> in a table of European Union countries. This low ranking masks the fact that the Irish rate of youth suicide (15 to 24 years – males and females) is 15.7 per 100,000 population, lifting the country to 5<sup>th</sup> place in the EU youth suicide table. The rate of young male suicides is seven times that of young females.<sup>2</sup> Historically (1890-1971) Ireland has had low suicide rates of less than 4 per 100,000 population but in the 1970s the rate rose exponentially, peaking in 1998 at 14 per 100,000.<sup>3</sup> Between 1970 and 1999 the suicide rate in the Republic of Ireland increased more than six-fold, from 1.8 per 100,000 to 11.7 per 100,000 population and was the second most common cause of death among 15 – 24 year old males, after road traffic accidents.<sup>4</sup> The average annual number of recorded suicide deaths in Ireland in the 1960's was 64 persons but by the year 2000 this had risen to 400 plus. In addition about 11,000 persons annually are treated in Irish Accident and Emergency Departments following uncompleted suicide attempts (parasuicide),<sup>5</sup> establishing that for every completed suicide in Ireland there can be as many as 25 unsuccessful attempts. Suicide numbers have risen steadily over the last 30 years in many countries<sup>6</sup> with very few studies on those who choose drowning as the means of killing themselves.<sup>7</sup> The US Center for Disease Control, for example, reported 971 suicide by drowning deaths in the USA between 1999 and 2001 so suicide by drowning should be considered as a possibility in water rescue situations not involving very young children.<sup>6,7</sup> In the Republic of Ireland, drowning is chosen as the method of death by one-fifth of male and one-third of female suicides. Irish Water Safety analysed 1800 drowning deaths in Ireland in the 10 years up to 2002 and determined that 40% of entries were accidental, 6% undetermined and 54% suicide. It identified 968 suicide by drowning deaths (703 male: 265 female) in that ten year period<sup>8</sup>. An earlier analysis of drowning statistics published by Ireland's Central Statistics Office for the ten years 1980 to 1989, showed that out of a total of 2065 drowning deaths 43% were accidental, 23% uncertain and 34% suicide.<sup>9</sup> It should be noted that at that time unless there was clear evidence of suicide an uncertain verdict was returned (suicide was not decriminalised in Ireland until 1993), thereby resulting in an under-reporting of all suicide deaths. As suicide drownings can potentially make up a sizable proportion of all drowning deaths they should be included in published drowning statistics.

## Causes of Suicide

The causes of suicide are multi-factorial involving the combination and interaction of biological, psychological, social and environmental risk factors in vulnerable individuals. The suicide act itself is often triggered by some precipitating event with potentially catastrophic consequences. Whether the individual survives the event can be as much a matter of luck as of the method chosen, with 55% of those who die doing so on their first known attempt.<sup>10</sup> The three most common methods chosen by males are shooting, hanging and drowning whilst females are likely to choose to overdose themselves. Two factors – mental illness and alcohol – are so significant that they need to be considered before proceeding further.

## Mental Illness

It is accepted by psychiatrists that there is a strong relationship between mental illness and suicide but no direct causal link exists i.e. someone suffering from mental illness will not necessarily attempt suicide. In Ireland post-suicide psychological autopsies established that between 65 and 95% of those who kill themselves suffer from some form of mental illness, often undiagnosed beforehand.<sup>11</sup> AWARE, an Irish support organisation for people with depression, believes that up to 80% of all those who attempt suicide suffer from depression but stresses that only a small minority of those with depression take their own lives. The organization estimates that up to 7% of the Irish population suffer from some form of depression and that one-quarter of all people will suffer from a depressive episode at some point in their lives.<sup>12</sup> It is believed that 10 – 15% of persons with psychotic illnesses are at risk from suicide with the risk at its greatest within the first five years after the onset of symptoms (when the person is usually young).<sup>2</sup> The support organization Schizophrenia Ireland reports that 10% of all persons diagnosed with schizophrenia go on to kill themselves.<sup>11</sup> Dr Tony Bates, in *Suicide: Ireland's Story*, says ' that people reach the point of taking their own lives when they feel desperately trapped by their particular circumstances and can see no possibility of escaping their predicament and no likelihood of rescue ' <sup>13</sup>

## Alcohol

The connection between suicide and alcohol is far more complicated than individuals simply being intoxicated and killing themselves. As with mental illness, there is a clear relationship between consuming alcohol and committing suicide but it is not causal i.e. drinking alcohol does not make a person suicidal. According to psychiatrist Dr. Justin Brophy Irish adults are among the highest consumers of alcohol in Europe but it is binge drinking rather than a regular drinking habit that leads to suicide. Some experts use numbers of drinks consumed (5 drinks in a row for men and 4 for women)<sup>14</sup> or length of time drinking (two or more days) to define bingeing but Brophy describes it as ' episodic drinking of sufficient alcohol to effect the outcome of intoxication of rapid onset, and for which control of the rate of consumption is initially willfully and then drunkenly suspended for periods lasting hours to months. The effect sought is primarily stimulation and disinhibition rather than relaxation and sedation' <sup>15</sup> Brophy states that many suicides occur immediately after bouts of binge drinking. A Department of Health (2002) commissioned survey of binge drinking in Ireland established that 48% of men and 16% of women binge drink at least once a week and out of 100 drinking events 58 for men and 30 for women end in bingeing<sup>16</sup>; also a European School Survey reported that Ireland is top of the league of underage drinkers with three-quarters of 15 and 16 year-olds admitting to drinking alcohol at least once a month and one-third binge drinking on three or more occasions a month.<sup>17</sup> Alcohol is a depressant and as individuals suffering from depression are already vulnerable to suicidal thoughts drinking can substantially deepen their depression leading them to kill themselves. An AWARE report on alcohol and suicide states that, 'If a young man is depressed, goes on a binge-drinking session and gets more depressed, he may become disinhibited enough to act suicidally, where he wouldn't when sober'.<sup>18</sup> The Foyle Search and Rescue service in Northern Ireland reports that 95% of persons that they come across climbing over the Foyle Bridge railings have consumed alcohol but are not necessarily intoxicated.<sup>19</sup>

## Suicide Recognition

Can a rescuer differentiate between an accidental and a deliberate entry into water? A rescuer may have observed the casualty climb over a safety barrier and jump into the water and be in no doubt, but if this is not the case, there are a number of indicators associated with suicide by drowning that may be helpful in making a determination;

Time: **at night between 10.00pm and 3.00am.**

Research indicates that most deliberate entries take place during this 5 hour time period<sup>8,20,21</sup>

Day : **a week-end or a Monday**

Most suicide deaths take place between Thursday night into Friday morning and Sunday night into Monday morning,<sup>8,20,21</sup>

Entry Point: **from a bridge over a river.**

This is the most common entry place when nearby; the entry point often being the centre of the bridge where the water is presumed to be deepest.<sup>20,21</sup> A pier or waterfront may be used if there is no available bridge or the person is at the seaside.<sup>22</sup>

Method of Entry: **a jump into the water.**

Research by Irish Water Safety indicates that, where it was possible to establish the fact, those who choose to deliberately drown themselves were often poor or non-swimmers. The person wants to kill him or herself and will normally try to avoid injuring themselves during the water entry.<sup>8,20,21</sup>

**Gender of the person: most likely a male.**

Male drowning suicides outnumber female by a ratio of 4: 1 and by a higher 5:1 ratio in the 15 to 35 year age groups.<sup>4</sup> Although it will be difficult to distinguish between males and females at a distance, especially in the dark, there may be discarded clothing or items at the entry point that will help establish the sex and size of the victim.

**Age: in the 15 to 35 years age range**

One in five of all suicides in Ireland in the five years period 1998 to 2002 were young males in the age range 15 to 24 years. Discarded clothing may help with this determination.<sup>8,21</sup>

**Alcohol: most likely to have been drinking beforehand**

There is clear evidence that a majority of males and a high percentage of females who attempt suicide drink large quantities of alcohol before entering the water. The younger the person the more they apparently drink. In a number of cases the person who drowned was observed leaving a public bar and jumping into a nearby river.<sup>4,8,21,23</sup>

### **The Drowning Process**

If a person jumps into water from a height he will submerge immediately on hitting the water. Although he may not have wanted to injure himself, hitting water after a long fall can be as traumatic as hitting concrete. He may be knocked unconscious, fracture bones and damage internal organs.<sup>22,24</sup> The impact with the water following a jump from even a low bridge may expel air from the lungs. All open water in and around Ireland is cold so he will certainly experience cold shock. He will inhale immediately and, since he is underwater, will draw water into his airway<sup>21,25,26</sup>. The water may not enter his lungs immediately but could trigger a reflex closing of his vocal chords, thereby blocking his airway leading to hypoxia i.e. a reduction in available oxygen. If he is conscious he will experience a distressing choking sensation. Some water will probably enter his stomach causing him to vomit.<sup>25,26</sup> Once in the water it used to be thought that a person, not wishing to drown, would thrash about trying to keep his head above water whilst a suicide would quietly submerge. This has been shown to be wrong. Research into drowning responses, such as that conducted by Frank Pia in the USA<sup>26,27</sup>, concluded that many drowning victims are unable to lift their hands out of the water to wave for help or are even capable of shouting for help – all they want to do is breathe so their heads are thrown back. If one has not seen the victim before they entered the water it is very difficult to establish if the person in the water is male or female, young or old, and by their actions in the cold water if they are trying to save themselves or not. It is important to remember that all this could be taking place at night, in cold water, with a victim who has most likely drunk a lot of alcohol and is wearing street clothing. The clothing may provide some buoyancy initially<sup>25</sup> due to air being trapped inside it but gradually this will be lost. The impact on entry from a height into water, however, may expel most of the trapped air unless the clothing is waterproof with good neck and wrist seals. Police reports regularly speak of unconscious or semi-conscious casualties floating in the water within 5 minutes of the entry.<sup>29</sup> The movement of water around a bridge will often produce eddies that can pin a victim to the legs of the bridge (above or below the waterline) or suck him in under it.<sup>28,29</sup>

### **What can a rescuer do?**

Officers of An Garda Síochána (Ireland's police service) have a lot of experience in rescuing persons attempting suicide by drowning.<sup>29</sup> The experiences of the officers is that victims do not usually respond to aural or visual signals (Shout and Signal) and will ignore or are unable to reach aids that are offered or thrown to them (Reach and Throw)<sup>21,29</sup>. Because the entry is often from the centre of a bridge into the middle of a river the distance from the river bank to the victim may rule out any possibility of a reaching or throwing rescue other than with a throw bag. An analysis of police rescues established that when contact was made with the person in the water none accepted a pro-offered rescue aid (usually a ring buoy) and most did not resist being towed to safety by a swimmer.<sup>21</sup> Most were unconscious or barely conscious when rescued. In almost all cases it was necessary for a police officer to enter the water; even when a boat was used in the rescue as the victim was unable to climb aboard and an officer had to enter the water to assist in the recovery. This was usually a consequence of the boats being leisure or work craft with high freeboards and/or the casualty being unable to lift his hands. A conclusion drawn from the rescue reports studied is that in the majority of suicide incidents if a successful rescue is to take place it will most likely have to be a swimming rescue.<sup>29</sup> Reports show that buoyant objects were thrown to those in

the water with little success; where boats were at hand and launched unless those in control were experienced and knowledgeable about boats and the river they were often more of a liability than a help in the rescue. Having thrown, or more properly having thrown away, any useful buoyant aids at hand bystanders often finally attempt an unaided swimming rescue. They may be good swimmers but once a rescuer enters the water he or she is subject to the effects of cold shock and river eddies. In the water the swimmer will experience breathing problems; trying to swim whilst unable to breathe properly will worsen the situation. If the swimmer has a heart problem they may suffer a heart attack in the water or experience chest pains.<sup>25,27,28</sup> They may also have been drinking themselves and are liable to vomit. Research has established that cold water reduces swimming ability substantially and a rescuer may only be able to swim a third or a quarter of the distance achievable by them in a warm swimming pool, meaning that they will probably have overestimated their swimming ability.<sup>26,28</sup> Should the rescuer succeed in reaching the victim they will now have to support the victim (even if they have a buoyant aid as it is often necessary to keep the face of a semi-conscious casualty out of the water) as well as swim and tow them to safety – if they are aware of the location of an exit – while he or she steadily grows weaker the longer they are in the water. Successful rescues do take place quite often and rescuers also drown during a rescue attempt. Eight (8) persons drowned while attempting to rescue someone in the five year period 2001 – 2006 and garda officers saved another six (6) would-be-rescuers.<sup>29</sup> There is an occasional ironic twist to this in that the original suicide victim sometimes survives the incident. There is evidence that the longer a person struggles to survive the greater the build up of carbon dioxide in their blood with a resulting acidosis and if removed from the water asphyxiated, the more difficult it is to successfully resuscitate them. The recovered suicide, who didn't struggle for long, has a lower level of carbon dioxide in his blood and therefore a better chance of being resuscitated successfully.

### **The Training of Lifesavers**

Lifesavers should always consider land based rescues first before attempting any form of swimming rescue. Their own personal safety should be of prime concern taking precedence over the rescue of the person in the water. In deciding on a course of action the following should be considered;

1. Don't needlessly throw away buoyant aids.

If the victim is within throwing distance and a rope and buoyant aid are available, tie the rope to the aid and attempt a throwing rescue. If there is no way of recovering a buoyant aid and others are not available, seriously consider saving it for a possible swimming rescue (Swim with an Aid).

2. Know where and how you are going to exit from the water before you enter it.

If you are alone and are not absolutely certain where you can get out with or without the casualty don't enter the water. Remember this will most likely be a night rescue and although there may be light at the entry point it could be dark at the potential exit point. You will also more than likely be entering moving water. Take the time to allow your eyes to adjust to the darkness before leaving the safety of the entry point.

3. Don't dive into the water

There may be hidden objects under the water that could injure you plus you too are subject to cold shock and will need to reduce its effects. Underwater search teams report that when bridges are being built construction workers often throw left over materials into the water under the bridge. If possible lower yourself into the water slowly to avoid a sudden reaction to the cold, keeping your head out of the water. You will naturally experience breathing problems which can be quite painful so keep your face out of the water. If you vomit or suffer chest pains get out of the water .

4. If you are determined to enter the water bring at least one buoyant aid with you

If a buoyant aid and a rope are available it may be possible to swim to the victim and have others on the river bank pull you and the casualty back to safety; this is a practice that works successfully for police officers. Don't throw the aid into the water first as it may float away from you – carry it with you. Rescuers are subject to cold shock so use the buoyant aid to keep your head out of water while your eyes adjust to the darkness and your body adjusts to the cold. If you find that you are uncertain about your own safety you should use the aid to save yourself. If more than one aid is available bring them with you as you may lose your own ability to swim as the rescue attempt unfolds and you add to the number of casualties in the water.

5. When you reach the victim adopt a stand-off position and reassess the situation

Stop two to three metres (7-10 ft) away from the casualty, keeping the buoyant aid between you, and try talking to him or her. He may or may not react to your voice. Ask yourself these questions: Is he conscious? Is he in a panic? Are you exhausted yourself? Where are you in relation to your planned exit point? If you take hold of him can you support both of you with your faces out of the water (with and/or without the buoyant aid)? Has anything changed since you entered the water (the arrival of a rescue boat maybe)? Asking these questions will only take seconds but are necessary as unless you are certain that you are able to carry out your rescue plan you must change it, put your own safety first and leave the victim to others if necessary. Once you take the victim into a carry you will lose a lot of manoeuvring ability and although you may reach the river bank you might not be able to climb out of the water yourself or pull the victim out unaided. The experience of police officers is that it often takes more than one officer to recover a victim from the water.<sup>29</sup>

### **A suicide success story**

Foyle Search and Rescue is an organization founded in 1993 to prevent the tragic loss of lives in the River Foyle as it runs through Derry City, Northern Ireland. The organization has saved over 800 lives from drowning in the period 1993 – 2006. Prior to 1993 between 35 and 40 persons drowned annually in the river. On Thursday, Friday and Saturday nights between 10.00pm and 3.00am volunteers patrol the 1.5 mile stretch of river between the New Foyle Bridge (150 foot high) and Craigavon Bridge (40 foot high) and the bridges themselves while a rescue boat is ready and available on the river. The members on patrol (usually three) carry radios and speak to anyone they come across whom they consider to be in trouble or a potential suicide risk. They can call out the rescue boat and or other emergency services should they think it necessary. Persons are invited back to their headquarters where, over refreshments, members of a specially trained Crisis Intervention Team talk to them and offer support from government and voluntary aid services.<sup>12</sup>

### **Why should I risk my life to save someone who is clearly trying to kill him or herself?**

For reasons outlined above no drowning death can be truly and absolutely declared to be a suicide, even if the entry was deliberate. Evidence supports the idea that once the person starts to drown an inborn instinct to stay alive is triggered and the person tries to save themselves but in a drowning situation it may be too late. Again there is evidence that the majority of persons who attempt suicide are suffering from some form of mental illness. In many cases the illness is not recognised until after they have been rescued. Statistics show that some of those saved do try to kill themselves again and some succeed in doing so but most, with treatment, go on to lead full productive lives.<sup>4,23</sup> Ken Baldwin, a survivor of a Golden Gate Bridge jump, stated ‘ I can still see my hands coming off the railing. I instantly realized that everything in my life that I thought was unfixable was totally fixable – except for my having just jumped.’<sup>30</sup>

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