New Zealand Pool Industry Association Incorporated, PO Box 17069 Greenlane 1546 email executive@poolguild.org.nz

PAPER 12

SWIMMING POOL SAFETY FROM DROWNING HAZARD

Changes in legislation:

As of 1 January 2017, the Fencing of Swimming Pools Act 1987 was deleted from Legislation so is no longer in effect. The Auckland Copuncil has a web page you should look up:

https://www.aucklandcouncil.govt.nz/building-and-consents/building-renovation-projects/install-residential-small-heated-pool/Pages/pool-legislation.aspx

Legislation relating to pool barriers and pool fencing is now the Building Act 2004. See Building Code Clause F9 - Restricting access to residential pool.

The Act applies to all residential pools and small heated pools with a maximum depth of 400mm or more.

Pools that are filled or partly filled with water must have physical barriers that restrict access to the pool by unsupervised children under 5 years of age.

Residential pools, including indoor swimming pools, require a compliant barrier and an inspection every three years, unless they are small heated pools that comply with F9/AS2 (see Pool area safety checklist).

If your pool barrier complied with the Schedule of the Fencing of Swimming Pools Act 1987, then it will probably still comply with the new legislation, although there are some exceptions.

Other related reading:

NZS8500:2006	Safety Barriers for young children around swimming pools, spas & hot tubs
NZS4441:2008	Code of Practise for swimming pools
	(Downloadable from http://www.standards.co.nz/)
	The Fencing of Swimming Pools Act (1987) and related T.A. Schedules

INTRODUCTION

In this PAPER we will look at pool safety and personal hygiene which must be subjects of vital concern to every pool owner/operator. A drowning is a tragedy which will devastate the lives of all who are involved with the home swimming pool concerned. Hence the pool owner has a responsibility to the whole community to ensure his/her pool is maintained and operated safely at all times.

2. THE POOL OWNER'S RESPONSIBILITY

No protective measures or safety equipment can substitute for sensible supervision and constant surveillance, particularly with young children. Not even the most competent adult should ever swim alone.

Young children should be taught to float and swim at the earliest possible age and made aware of water safety. Always remember that young children cannot readily understand the concepts of safety, danger, drowning or even death. They also tend to forget quickly, unless they regularly practice maintaining their awareness and competence.

Home pool users are urged to undertake a first aid course, as preparation for accidents which may occur. Emergency care of serious injury may be necessary until medical help arrives.

3. THE POOL OWNER'S LIABILITY

Where an injury to any person occurs, then the legal liability may fall upon the person responsible for the premises at which the injury is sustained. This is possible even if you have taken reasonable precautions to give protection, for example, the provision of adequate pool fencing, 'child-proof' gate locks, etc.

4. ACCIDENT PREVENTION

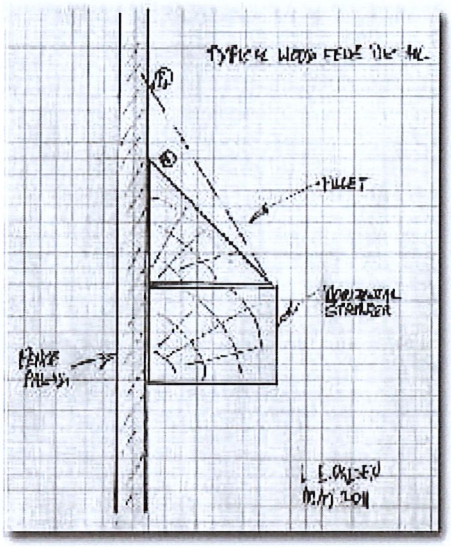
Accidents usually result from thoughtlessness and lack of care. Conversely, man accidents can be prevented by care and foresight.

In the main, accidents are produced, increased or reduced in severity, by elements under human control so you must keep the possibility of accidents always in mind, and learn what acts and situations are likely to produce accidents. Human error and lack of regard for the obvious are the chief causes of accidents. It is too late when we read of such a drowning in the daily newspaper.

5. POOL FENCING and SELF-CLOSING DOORS accessing pools

Swimming Pool boundary fencing provides protection against unsupervised access to your swimming pool or spa ONLY WHEN GATES ARE CLOSED SECURELY.

In Australian standard 1926, **(Australian Standard AS1926:2012)** the Standards Association of Australia recommends that all pools should be completely fenced, either around the immediate perimeter of the pool, or around the boundary of the property. This is referred to as "Ring Fencing".



This concept has (so far) not been adopted in New Zealand, as a house or building may form part of the barrier providing it is Code Compliant. In New Zealand we are guided by the NZ Building Code F9/AS2. Some NZ Councils introduce their own bylaws which add to the F9 Code, so do some research with them.

Pool fencing must be a minimum of 1.2 metres high, and the exterior of the fence must provide no hand or foot hold which would enable a child to climb it. Auckland Council may requite a smooth (unclimbable) surface on both sides of the fence, and a 1.5m distance from the pool-to-fence – but this is not on the Building Code so may be disputed. Gates must be self-closing and self-latching, the latch being on the inside of the gate out of the reach of children. The bottom of the fence must be no more than 100 mm from the ground level at any point along the perimeter and any vertical bars or boards no more than 100 mm apart.

Existing fences that have horizontal beams that face away from the subject property may be modified by adding a triangular infill to make it unclimbable. Previously a 45° was allowed, but the 2010 decision by the Dept of Building & Housing (now MBIE) accepts a 60° timber infill. Check with you local Territorial Authority about this.

A relatively recent alternative development in pool security (i.e. 2005) is the self-closing sliding door ("Ranch Slider") in the house wall facing the swimming pool. These are relatively new and are (in some Local Councils) under debate on their suitability. Data research on one type of self-closing sliding Ranch Door (SWISH AUTOMATION) indicated many hundreds of installations over the past 16 years (to 2021) with zero safety issues or accidents to date. Let us hope this record is sustained in the future. http://www. https://www.swishautomation.com/ for extract see below.

- Unobstructed visual and physical enjoyment of indoor-outdoor living
  Pool-safety compliance NZBC F9 / F9.2 / F9.3.1 / F9.3.4 using NZS 8500-2006
- Swish-designed slide door safety systems prevent pool access by unsupervised children under 5 years.
- Swish self-close and self-latch or alarm and self-latch door systems can be retrofitted

While all of the above should be regarded as a ***minimum standard***, the requirements of Local Government Authorities vary greatly. Check with your Local Government Authority and obtain relevant details. It is recommended that some form of additional security such as a chain and padlock be used when the home is vacated for any lengthy period to ensure that the pool gate/s remain closed.

Children are fascinated by water and will always be drawn to a sparkling swimming pool. Pool fencing has bee designed, if installed correctly, to keep even the smallest child from crawling through or under the fence, or from opening the gates leading into the fenced area. The range of manufactured pool fencing is quite large.

If you encounter self-build or a pool fence built by a contractor, it must conform to the specifications of pool fencing as set out in the New Zealand Building Code F9/AS2.

6. POOL ALARMS

These are designed to trigger a loud siren should anyone enter the pool while it is unattended.

The simplest type, operated by a battery consists of two metal rods connected to the alarm, with one rod lowered into the water, and the other set about 20 mm above the surface. If someone falls into the pool while the alarm is set, one of the resulting waves should touch the second rod, completing the electrical circuit and triggering the alarm.

Another type which has a small underwater microphone lowered into the pool, reacts to shock waves created by someone falling into the water. Both of these types of alarms can also be triggered by strong winds, heavy rain or objects falling into the pool.

A much improved alarm is the microwave type operating from a microwave beam set to scan the pool surface or the surrounding area. If anyone enters this area, the beam is broken, and the alarm is set off.

Any type of alarm system must be tested frequently to ensure it is in good working order. Batteries have only a limited life, and should be replaced regularly. Neighbours should be advised of the alarm's presence, and asked to take appropriate action should it be set off. You must remember to switch it on whenever the pool is unattended, ensure that it works and can be seen or heard.

No alarm is infallible. It is useful as an additional safety precaution only, and should never be a substitute for proper fencing and/or adequate supervision.

7. POOL SAFETY COVERS

A safety cover for private swimming pools and wading pools must comply with the NZ Building Code, and the Australian Standard 2020 which details the requirements of those covers designed to inhibit access by children up to 5 years of age. Unless a cover complies with this standard, it cannot be correctly referred to as a safety cover.

Other covers used primarily for keeping out debris or to act as solar blankets were discussed in PAPER 4.

Safety covers complying with the above standard must be performance-tested to prove that a child's face cannot be submerged in water, either as a result of the child's falling between the edge of the cover and the side of the pool, or when the cover is deflected to the extent that water flows onto its surface. The design must incorporate features, which will prevent rainwater being retained on the surface or water from the pool seeping on to the surface of the cover. An indication of the life expectancy of the cover must be marked on it.

The cover must also be designed so that firstly, it can be handled by one adult, and secondly, that it can be placed in position and fastened or removed within a period of 5 minutes. Unless these conditions are met, the owner of the pool would be discouraged from covering the pool at all times when not in use.

Provided that safety covers are installed correctly, they are useful safety devices where the pool is left unattended for any length of time.

Due to the stringent requirements of AS/NZS2020, very few safety covers are marketed, owing to the high purchase cost and consequent low market demand. If you are purchasing one, make sure it complies with AS/NZS2020.

Otherwise its use as a safety protection device will be very much negated, and indeed, may even endanger the child's life by trapping him below the water surface.

As with any safety device, a safety cover should be inspected regularly and tested to ensure that it is still capable of supporting a child's weight.

8. LADDERS, GRAB RAILS AND HANDRAILS

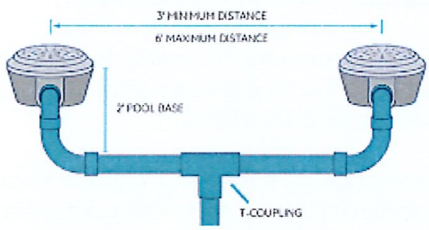
Thoughtfully positioned ladders, grab rails and handrails are an important part of pool safety. In the shallow end of the pool beside the steps, a correctly positioned stair handrail can provide safety and ease of entry and exit, especially for children and the elderly. In the deep end, a ladder for entry and exit, and a correctly positioned handrail at water level will provide assistance and assurance for children.

The use of grab rails in conjunction with niche steps cast into the pool walls is an alternative to a ladder. A range of shapes, sizes and modes of attachment allow for ladders, grab rails and hand rails to be installed at the time of construction of the pool or at any later stage. They are normally manufactured from stainless steel tube.

Ladders can be fitted with a ladder pivoting attachment to permit ease of installation of pool covers and to allow uninterrupted operation of automatic pool cleaners. Ladders are supplied in 2, 3 or 4 step configurations. The type of installation of ladders varies between concrete pools and fibreglass or vinyl-lined pools. In the latter case, the interior of the pool cannot be used for attachment of the latter. In such cases, a cantilever type is used.

9. Main Drains & Skimmers

Main Drains and Skimmers fitted to concrete and fibreglass swimming pools may cause additional safety infractions. Main Drains must be in multiple of two (or more) so that suction from one being blocked by a swimmer will not be strong enough on its own to hold the swimming down – they MUST be plumbed into a secondary suction source (such as a skimmer) and NEVER be the sole source of water drawn from the pool.



The main drain has been responsible for numerous drownings due to suction effect on swimmer's bodies, and (much worse) there have been a number of cases of a Skimmer disemboweling small children. Refer to the New Zealand Standard NZS8500:2006 for more detail on suction entrapment dangers to swimmers.

A SINGLE MAIN DRAIN IS A POTENTIAL KILLER OF SMALL CHILDREN! Pool Builders must use this component safely, and with due consideration to Building Code and NZS:8500 to reduce or eliminate any risk.

10. SAFE PRACTICES

If common sense safety rules such as those discussed in this section are followed, a home swimming pool can provide an immense amount of enjoyment for the whole family with little risk or danger involved.

11. CONDUCT

(1) Supervision:
Children should not be left unsupervised until they are competent swimmers, and are old enough to understand the dangers of horseplay. Flotation toys or swimming aids will not guarantee the safety of an unsupervised child.

(2) Behaviour
Running on pool surrounds, 'dive bombing' and boisterous conduct should not be tolerated at any time.

(3) Diving

Most home pools in the 21st century don't have the diving boards that were often found in 1970's pools. Perhaps because they are not as deep as in those days – where 2.4m deep end pools were common. 1.8m deep end pools are more common, so "shallow diving" is more common thatn "deep diving" in these days, and "Bombing" is mre the norm.

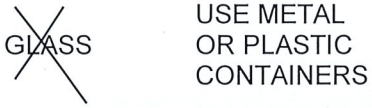
Unless there is at least a 2.4 m depth of water, diving definitely must not be allowed. Otherwise permanent spinal and/or head injuries may result.

DIVING CAN BE EXTREMELY HAZARDOUS

(4) Learn to Swim
Children should be taught to swim properly by competent instructors as early as possible.

(5) Resuscitation
Make sure that adults or older children using the pool have a working knowledge of resuscitation methods and first aid to be applied in the case of apparent drowning.

(6) Glass
Never allow glass objects near the pool, as broken glass is most difficult to locate in a swimming pool. Glass bottles particularly should be banned from the pool area.



(7) Alcohol
Never swim alone and do not mix alcohol and swimming.

(8) Underwater Swimming
Do not swim long distances underwater. Deep breathing prior to swimming can cause loss of consciousness when swimming under water.

(9) Eating
Do not swim immediately after a large meal. Wait at least an hour before entering the pool. It is wise to engage in other activities during this period.

(10) Tiredness, Water Temperature
Do not swim when you are overheated or over tired or when the water is particularly cold. All these are possible reasons for people collapsing during swimming sessions.

(11) Storms
Keep out of the pool during storms. Move into indoor shelters for the duration of a thunderstorm

(12) Absent Owner
Insist that neighbours' children or others who use the pool while you are not present have their own adult supervision. For your own peace of mind and to avoid a possible tragedy, this should be made an unbreakable rule.

(13) Hot Tub to Swimming Pool

Do not jump straight into a cold pool after a long session in a hot tub, as fibrillation can occur due to extreme temperature changes. (Fibrillation is uncoordinated contraction of individual muscle fibers of the heart, giving rise to an irregular and inefficient heart action).

12. GOOD HOUSEKEEPING AROUND THE POOL

This is very important in order to prevent accidents. Note the following:

(1) Loose Objects
Tools, parts, chemicals and other loose objects should be stored immediately after use and for obvious reasons, not left at the poolside.

(2) Warming Signs
These should be erected to signify possible danger or inconvenience, such as wet paint, slippery surface or an area-undergoing repair.

(3) Lighting
Adequate pool lighting should be provided especially at steps and ladders so that the pool may be used at night if desired.

(4) Resuscitation Notice
A durable notice explaining mouth-to-mouth resuscitation should be prominently displayed near the swimming pool with a list of emergency telephone numbers, e.g., doctor, ambulance and police. These telephone numbers should also be kept near the phone. See Fig. 6

(5) Water Quality
Properly sanitize and filter the pool water as discussed in previous Papers, to prevent the rapid reproduction of organisms in the water which may be dangerous to health and/or equipment, and to ensure correct water clarity so that pool users are visible in the water at all times. Children have drowned because would-be rescuers have not been able to locate them quickly in cloudy pools.

(6) Rescue Aid
A pole with a blunt hook (shepherd's crook) or a buoyant aid on a rope should be readily available near the pool to swimmers and non-swimmers alike to give help to a person in difficulty in the pool.

(7) Clear Fences
Never leave objects near pool fences that would enable children to stand on them to climb over the fence.

(8) Floating Objects
Never leave floating objects in the pool as they can attract young children.

(9) Open Gates
Do not prop open self-closing gates.

(10) Extension Leads
Do not allow electrical power extension lead plugs and sockets near the pool area.

(11) Overhead Wires
Ensure that any overhead wires are well clear of the pool and out of reach of long handles of pool cleaning equipment. (Most of these handles are of aluminium construction and are excellent conductors of electric current).

(12) Security of Fencing
Maintain the security of the pool by regularly checking and oiling the gate and self-closing mechanism, and ensure that the fence is in good condition.

(13) Portable Wading Pools
Always empty portable wading pools when they are not being used, and leave them in a position that will not allow water to accumulate in them.

(14) Pool Markings
Private pools do not require depth markings, however depth marking is a good idea as it may help to prevent someone from diving into water too shallow for complete safety.

(15) First Aid Kit Location
Make certain everyone in your family, and visitors, know where you keep first aid equipment (band-aids, iodine, etc.). Keep it handy, in a convenient location. (But, well away from the reach of small children!).

13. SAFETY WITH ELECTRICITY

It is vital that any electrical equipment associated with the swimming pool be installed correctly and maintained in first class condition, because minimum clothing, bare feet and wet skin effectively lower the body's electrical resistance. Hence the effects of an electrical shock on a person in or near a swimming pool are likely to be even more serious than in other locations.

DIAL 111 IMMEDIATELY

Any electrical installation can suffer deterioration due to the elements and to chemical action. Therefore it is recommended that a licensed electrician carry out a safety inspection at intervals of about two years. Even a small voltage in the water may cause drowning due to loss of muscular control.

The swimming pool electrical installation will include the filtration pump motor and may include lighting and power outlets. The following electrical safety practices must be borne in mind at all times.

(1) Minimum Electrical Wiring and Equipment Only
Eliminate as much electrical wiring and equipment as possible from the pool area.

(2) Lighting
Have your electrical contractor install permanent outdoor lighting in preference to underwater lighting.

If underwater lighting is to be used, have the extra-low voltage type installed in preference to the 240 volt type, and check lighting equipment regularly for glass cracks or defective seals.

(3) Overhead Wires

Fiberglass pool delivery may involve a Crane lifting the pool over the house coming dangerously close to overhead wires. Ensure that these hazards are taken into consideration. Have a Safety Person watching the situation.

Avoid positioning a pool under any overhead electrical wires going to the house, as there is always a danger of a broken wire falling into the pool and electrocuting the occupants. Make sure overhead wires are not in reach of diving boards or pool equipment.

(4) Electrical Appliances

Electrical appliances and cords should not be used near the pool where they can be splashed or become wet. Never position any mains-operated light or appliance where it could possibly fall or slide into the pool. There is an Electrical Code for distancing electrical devices in the vicinity of a swimming pool

Zone 0 - This covers pool water area of the swimming pool.

Zone 1 - Zone 1 is the area 1.2m from the edge of the swimming pool water

Zone 2 - This is the area 2.25m from the edge of the swimming pool water

Zone 3 - This is the area 2.4m from the edge of the swimming pool water

CHECK THESE ZONES WITH YOUR LOCAL AUTHORITY, AS THINGS CHANGE FROM TIME TO TIME

(5) Extension leads and their connections need special care.

(a) Do not allow plugs and sockets to lie on damp ground or low lying areas where water or moisture may collect.

(b) Keep electrical leads, etc., as far from the pool as possible and clear of access paths.

(c) Never connect or disconnect extension lead with the power on.

(d) Examine leads regularly for signs of damage and also have them checked regularly by your electrician.

(6) Pool Owners Responsibility
Ensure that the person supervising the pool knows the location of all electrical power sources to pumps, chlorinators, cleaners, lighting, etc. and knows how to turn off these power sources in case of an accident.

14. SAFETY WITH CHEMICALS

The chemicals used in pool maintenance require extreme care in handling and use if potential hazards are to be avoided. Pool test chemicals should also be used carefully.

Observing the following simple precautions can reduce hazards presented by pool chemicals.

(1) Storage

Keep chemicals under lock and key out of the reach of children, and well away from containers of other household substances such as detergents, fertilizers, petroleum products (grease, oil, petrol, etc.), acids and alcohol. Contamination by any of these materials could cause an explosion or fire.
Store chemicals in their original containers in cool clean dry areas preferably at ground or near ground level to avoid accidental spilling of the contents over anyone. The storage area must not be near steam pipes or other sources of heat.

Do not store large quantities of pool chemicals as many of these chemicals have a limited 'shelf' life.

(2) Container Use
Open containers very carefully. Do not inhale dust or fumes. Replace original lid securely immediately after use to keep out moisture and to avoid possible contamination.

Never transfer chemicals from one container to another and never store a chemical in a container that has previously contained another chemical.

Always read the instructions on the container and follow them rigidly.

(3) Mixing Chemicals
Never mix different pool chemicals together.

(4) Scoops
Use only clean, dry and non-combustible scoops such as porcelain, glass or enameled cups, or metal spoons for transferring the chemical from the storage container to the mixing container or pool. Use separate scoops for each product.

(5) Dissolving Chemicals
Never dissolve the chemical in any other than plain water. Never pour water over a chemical. Always pour the chemical into the water.

(6) Spillage
Avoid spillage. If it occurs, clean it up as soon as possible. A good idea is to dispense chemicals over a plastic sheet (polythene) so that any spillage can be readily removed. Dispose of spilled material immediately by flushing with copious quantities of water, and not back into the container.

(7) Disposal of Containers
Rinse empty chemical containers thoroughly with water before discarding.

(8) Disposal of Test Samples

Do not tip test samples of pool water and chemicals back into the pool.

(9) Dispensing Chemicals
Avoid direct contact with chemicals and always wash your hands after using chemicals. When dispensing liquid acids, wear protective plastic gloves and safety goggles. Leather and cloth gloves are easily impregnated by acids and thus could become a liability.

(10) Children and Chemicals
Never let young persons or anyone not aware of the danger handle or purchase pool chemicals.

(11) Fire Extinguishers
Liquid type extinguishers should not be used to extinguish fires involving dry granular hypochlorites or chlorinated cyanurates. Use copious volumes of water. Do not breathe fumes.

15. RESCUE AND FIRST AID

When a person has been overcome by drowning, electrocution or by breathing a noxious gas or air deficient in oxygen, rescue must be followed by immediate resuscitation as soon as the victim is in a safe area.

DIAL 111 IMMEDIATELY

When breathing ceases, the oxygen supply to the brain is interrupted. If the oxygen supply is not restored within 4 minutes, irreversible brain damage will almost invariably occur. The air you breathe out is not spent. That is to say it is not completely devoid of oxygen. The amount of oxygen it still contains will support life and the amount of carbon dioxide it contains will not harm the victim.

So Expired Air Resuscitation (E.A.R.) either mouth-to-mouth or mouth-to-nose must be used whenever breathing has stopped, whatever the cause. Both mouth-to-mouth and mouth-to-nose methods are equally effective and the choice depends on the circumstances and the personal preference of the operator. (Mouth-to-nose cannot be used if an effective mouth seal is not obtained or if the nasal passages are blocked).

All home swimming pools should display in a prominent place a wall chart (preferably waterproof) showing either mouth-to-mouth or mouth-to-nose expired air resuscitation. Copies of approved posters are available from the Queensland Health Department - Division of Health Education and Information, 509 Costin Street, (PO Box 155) Fortitude Valley, 4006. Most swimming pool supply shops stock plastic resuscitation wall charts for outdoor use.

All parents, pool owners and users should learn at least one method of expired air resuscitation, preferably on a manikin (dummy) under supervision. It could save a life.

The technique of external cardiac resuscitation, if applied within three minutes of cardiac arrest, will frequently cause an arrested heart to beat again. Hence this also is an extremely valuable technique to know how to apply, and is it highly desirable that it also is learnt on a manikin under supervision.

For information on classes, contact your local Ambulance Brigade, Red Cross Society, National Heart Foundation, Royal Life Saving Association, St John's Ambulance Association, or Surf Life Saving Association.

16. PRIORITIES IN AN EMERGENCY

(1) Quickly Assess the situation and .... IF IT IS LIFE-THREATENING CALL 111 IMMEDIATELY

(2) Allot Priorities

Care for the unconscious first.
The unconscious may die if airways are blocked because the tongue is blocking the air passage. Check for this.

(3) Assess - airway, ensure it is clear - breathing, look and listen

(4) If not breathing, turn patient onto back and begin rescue breathing

(5) Call for help – but do not leave the patient. You have only FOUR MINUTES before a non-breathing patient suffers irreversible brain damage.

17. SAFE RESCUE

To ensure the maximum degree of safety for the rescuer, dry methods of rescue of a swimmer in trouble in a swimming pool should be considered first.

Lie down, anchor yourself and reach out with an aid.

Aids can be:

Rigid, e.g., specially designed reaching pole, stick, paddle or vacuum cleaner pole;
Non-rigid, e.g. towel or clothing.

A distressed victim may not grasp an aid, and the rescuer may consider it necessary and safe to make a contact rescue.

A small child distressed in water, which is shallow to the adult rescuer, would be one such circumstance.

In order to calm a distressed victim it is usually necessary to elevate the victim's head and shoulders clear of the water, to about mid-chest region; just the face clear of the water is usually insufficient.

MOUTH-TO-MOUTH RESUSCITATION

All pool owners should be able to resuscitate a nearly drowned victim. Resuscitation should commence immediately.

EXPIRED AIR RESUSCITATION IN SHALLOW WATER
USING THE EDGE FOR SUPPORT

Remember the rates:

Approximately 15 breathe per minute (every 4 seconds) for adults.
Approximately 20 breathe per minute (ever 3 seconds) for children and infants.

REMEMBER!

"ACCIDENTS" ARE GENERALLY NOT ACCIDENTAL! AVOID THE CAUSES OF SO CALLED "ACCIDENTS"
AN ADULT AT MUST SUPERVISE CHILDREN USING THE POOL AT ALL TIMES.
ROUGH PLAYING OR RUNNING AROUND THE POOL AREA IS BANNED!

NO VERTICAL DIVING! THEY DON'T CALL IT SUICIDE DIVING FOR NOTHING

SAFETY COVERS WORK ONLY WHEN PLACED PROPERLY IN POSITION
A CHILD CAN EASILY BE KILLED IN SUCH AN ACCIDENT!
BE SURE THERE IS ENOUGH WATER DEPTHS BEFORE DIVING!

FIRST AID AFTER CONTACT WITH CHEMICALS IF SPLASHED:

SKIN. Flush with plenty of water for 15 minutes. Remove contaminated clothing. If irritation persists, obtain medical attention.
EYES. Flush with plenty of water. Call a doctor immediately. Continue flushing for at least 15 minutes.

IF SWALLOWED: Do NOT induce vomiting. Drink large quantities of water or milk.

Follow with milk of magnesia, vegetable oil or beaten eggs. Call a doctor immediately or contact the Poisons Information Centre. (See the front of your phone book or Brisbane 253 8233).
ALWAYS BE PREPARED FOR AN EMERGENCY. TECHNICAL SKILL IS ACHIEVED ONLY BY REPEATED PRACTICE.

QUICKLY ASSESS THE SITUATION ... AND

1. ALLOT PRIORITIES.

2. CARE FOR THE UNCONSCIOUS FIRST.
THE UNCONSCIOUS VICTIM CAN DIE QUICKLY BECAUSE THE TONGUE MAY BLOCK THE AIRWAY IF THE VICTIM IS LYING ON HIS/HER BACK.

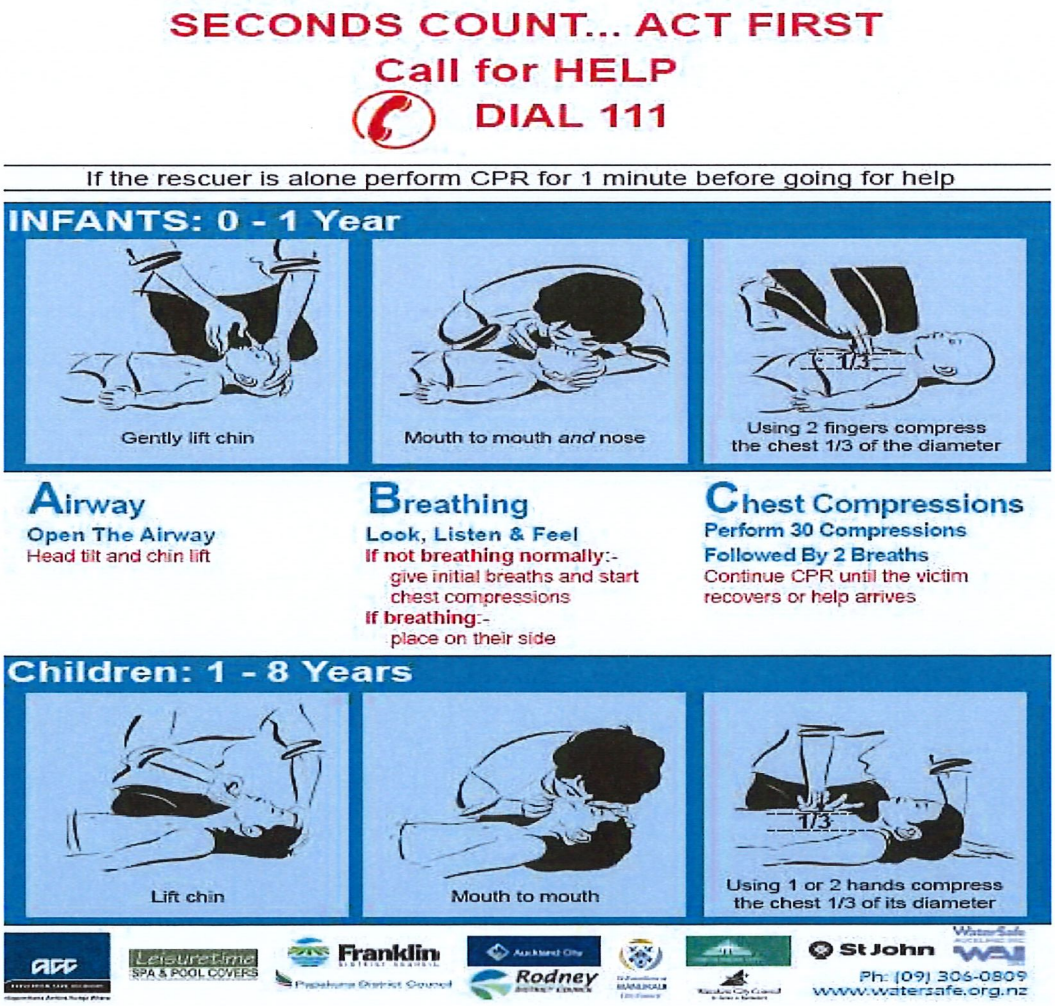
3. ASSESS AIRWAY.....
ENSURE IT IS CLEAR.
TURN THE VICTIM ON HIS/HER SIDE AND REMOVE LOOSE FOREIGN MATERIAL (USE FINGERS IF NECESSARY.)

4. BREATHING.....
LOOK AND LISTEN. IF BREATHING LEAVE PATIENT ON HIS/HER SIDE.

5. IF NOT BREATHING.....
TURN PATIENT ON TO HIS/HER BACK AND BEGIN EXPIRED AIR RESUSCITATION.

CALL FOR HELP BUT DO NOT LEAVE THE PATIENT.

ONCE BREATHING STOPS, YOU HAVE ONLY 4 MINUTES BEFORE THE BRAIN SUFFERS IRREVERSIBLE DAMAGE, SO BEGIN EXPIRED AIR RESUSCITATION IMMEDIATELY AND CONTINUE UNTIL BREATHING IS RESTARTED OR EXPERT HELP ARRIVES.



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