SNOWSPORT SCOTLAND

Freestyle

Water Ramp Supervisor Award

WATER RAMP SUPERVISOR COURSE

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1. Duties of a Water Ramp Supervisor

- To read, learn and apply the Code of Use for Water Ramps. ***Appendix 1***
- To set up the facility for safe use by skiers and snowboarders who are already qualified to use it
- To check and list the jumping qualifications of those who will use the ramp.
- To prepare the jumpers to use the ramp safely
- To supervise (direct and control) the jumpers whilst they use the ramp to practise manoeuveres.
- To restrict / remove unauthorised activities
- To close down the facility.
- **THE SUPERVISOR WILL NOT BE ABLE TO ADVERTISE INSTRUCTION OR COACHING.**

2. Pre-Course Criteria

- Applicants must be registered with a Home Nation Governing Body – SNSC or ESC – This can be done on the day of the course.
- Applicants must be 18 years of age or over
- Applicants must be able to swim competently fully clothed – this will be assessed by an RLSS examiner on the day of the course.
- Applicants must satisfy at least one of the following criteria:-
- *Holder of the 1* Aerials Award - This can be examined on the day of the course.* ***Appendix 2***
- *Grade 1 BTF Trampoline Coach*

- *Qualified Ski or Snowboard Instructor*
- *Be deemed to be a suitable applicant by the Course Tutors*.

3. Introductory Talk

- ***Aims of the Course***
- The course is aimed to qualify appropriate responsible adults to supervise training sessions at the water ramp, by skiers or snowboarders who are performing jumps that they are qualified to train. Ie – aerialists should not be learning new categories of moves for the first time without the presence of a qualified and registered aerials coach.
- Whilst we are keen to develop the sport in this country and aim to qualify as many people as possible, safety will not be compromised and it is the absolute right of the Course Tutors to fail an applicant who is not deemed to be suitable.
- **Safety is our paramount concern and all applicants should read carefully the Code of Use for Water Ramps.**
- Holders of the qualification will be expected to provide proof (log book) that they have been supervising sessions regularly. Anyone who fails to satisfy the Course Tutors that they are up to date with the latest developments and who have not used their qualification, may be asked to re-take the course at a future date.
- The supervisor has the responsibility to run the session, ensure the safety code is adhered to, and be prepared to act in case of an emergency.
- The supervisor needs to be aware of the potential danger of water ramping and to do everything they can to avoid these dangers.
- The supervisor must be prepared to jump into the pool to pull out an aerialist in need of assistance. Therefore they need to be a competent swimmer when fully clothed.

4. Potential Dangers of Water Ramping

- *Skier or boarder failing to reach the end of the kicker in a safe and controlled manner.* This has happened to many aerialists and even to those of outstanding competence. A lapse in concentration, or problem with equipment can lead to a skier or boarder 'catching an edge' and either skiing off the side of the jump, or falling over in the transition or on the kicker. It is essential, therefore that nobody is standing next to the kicker, other than the supervisor or coach, who must be prepared to move out of the way quickly. It is also essential that all aerialists check their equipment before and after each jump – skis and snowboards suffer a huge impact on landing in the water and can break or become damaged in a way that is not immediately obvious.
- A *ski or snowboard becoming detached whilst the aerialist is in flight.* A ski or snowboard which becomes detached in this way becomes a danger to the aerialist and to those around the jumping area. It is for this reason that we strongly recommend that all skis and snowboards are attached with straps to the aerialist. It also can result in the loss of equipment, or interruption of training whilst equipment is retrieved.
    - *A skier/boarder hitting the kicker with their head, hands, or back when trying a backward somersault.* This can be a result of over rotating on the kicker or collapsing into it. It is important to keep firm body tension when performing aerials and to become airborne before any somersault is performed.
    - *An aerialist can sustain spinal injury whilst water ramping.* This is very rare and is only caused when someone has had a serious impact with a hard surface. If there is any suspicion that a person has suffered any spinal injury, then it is vital that the appropriate action is taken and that a suitably trained person deals with the situation.

Any jumper experiencing symptoms which could be spinal cord related should be seen in hospital. These include bad neck or back pain, weakness tingling - including shooting feeling down arms or legs or any odd altered sensation or loss of movement.

- *An aerialist may become winded on impact with the water.* This is a frequent occurrence, despite the wearing of impact vests and is usually a result of landing on the front or back in the water. Recovery is normally swift, but the aerialist will need immediate assistance to the edge of the water – usually by a flotation device attached to a rope. Medical assistance should be summoned if recovery is not immediate. If patient is **unconscious** check their airway is clear and patient is breathing. Do not move and keep warm with blankets.
- *An aerialist may suffer from hypothermia.* This can happen as a result of immersion in cold water, or as a result of exposure to cold weather. See **appendix 9**
- *An aerialist may become exposed to Weil's Disease.* This is very unlikely, but aerialists need to be aware that it is a possibility. See **appendix 9**
- *An aerialist may sustain bruising as a result of impact with the water.* This can occur as a result of landing on the face - eg black eyes etc.
- *Unconsciousness and risk of drowning as a result of injuries sustained.* An aerialist ending up unconscious or face down in the water, must be assisted to land as swiftly as possible and medical assistance obtained.
- *Concussion.* This can occur after a blow to the head. It is possible to suffer concussion simply by hitting the water head first. If the jumper has hit his/her head on the kicker there is a danger of neck injury as well as head injury. The jumper may need rescue from the water. Mild concussion does not always manifest itself immediately so symptoms could be observed several hours after the crash. Symptoms of concussion are confusion and memory loss and can be very mild. Any jumper showing these symptoms should be seen by a doctor. Any jumper suffering a head injury causing Loss of Consciousness even only for a very short period of time should be seen in Accident and Emergency. Avoid alcohol after a concussion. In the hours after apparent recovery from a concussion any fitting, persistent vomiting, severe headache, dizziness, confusion strange behavior or loss of consciousness, difficulty seeing, walking or difficulty waking the patient, then call 999 for an ambulance. After a concussion it is advised that care be taken to avoid a repeated head injury for 2-3 weeks and so should not jump again during that time.
- *Death.* Although unlikely, it is important to remember that an aerialist may sustain fatal injuries as a result of jumping off a water ramp.
- *Burst eardrum.* This can occur as a result of side-impact with the water. The risk of this is greatly reduced by having the ears covered. Symptoms are acute pain and loss of balance. The person must stop jumping and protect the ear. A doctor should be seen that day.

5. Site Preparation

- The supervisor shall open the site once he/she is satisfied that the facility is safe and ready for use
- The supervisor shall ensure that the quality of the water is safe for jumpers. In some cases, a water quality test is available.
- Keep the area around the kickers clear. If a jumper catches an edge on the in run they may deviate and miss the jump completely so the entire area must be clear except the supervisor or coaches who must be ready to move quickly out of the way.

- Check the landing is completely clear before giving a clear signal to the one jumper waiting to set off.
- Check the in run, transition and jumps are wet enough. Any dry spots can cause jumpers to crash. **Appendix 11**
- Check there are no sharp objects or obstructions on the in run or transition.
- Check that the floater or kicker is stable
- Check that the pumps are working correctly.
- Check that there are no other obvious hazards including objects in the water. Eg Shopping trolley.

6. Equipment and Equipment Checking

- The supervisor shall ensure that all aerialists are wearing suitable attire for jumping:-
- *Wetsuit or drysuit, helmet with covered ears, bouyancy aid/impact vest, boots, skis or snowboard, preferably attached to the skier/boarder by powder leash.* 'Shorts' style wetsuits are acceptable but full length overtousers must be worn to ensure that legs are covered. Arms and hands should also be covered to prevent injury on the ramp should the aerialist fall over on the in-run or kicker. Gloves also help with warmth and protection from impact with the water.
- *Poles should never be used on the water ramp..*

7. Safety Procedures

- The supervisor shall ensure that they are familiar with the accident procedures for the facility at which they are operating.
- All open cuts should be covered with a waterproof dressing as protection against Weil's Disease and other infection.
- Ensure that a working slope radio is available, and a telephone, and survival blanket.

8. Log Book For Aerialists

- All aerialists should be in possession of a log book in which their jumps should be recorded at the end of a training session. This must be shown to the supervisor before the aerialist jumps, so that the supervisor which jumps the aerialist is qualified to train. This must be discussed and made clear at the start of the session. An aerialist with no log book should not be jumping without the presence of a qualified coach. ***Appendix 4***
- Aerialists should only be training categories of jumps which they have been qualified to train by a qualified coach. The categories for skiers are:
- *Basic upright jumps* – Straight jump, spread eagle, twister, daffy, Cossack, Mule kick, Back scratcher.
- *Multiple upright jumps and helicopters*
- *Forward Somersault - single*
- Back*ward Somersault – single*
- *Double somersaults backwards without twist*
- *Double somersaults backwards with twist*

- *Triple somersaults*
- The categories for snowboarders are:
- *Straight jumps, and basic jumps – indie, mute, melon, method, 180 no grab, fakie straight jump, no grab*
- *More advanced upright jumps – palm air, stalefish, crail, icepick/seatbelt, tuckknee/japan air, tailgrab/nosegrab, stiffy, roast beef, chicken salad, shifty, any double handed grab, fakie straight jump with any grab, 180 delayed/stalled, no grab, 360 no grab, 180 with any grab, fakie 180 no grab, 360 with any grab, fakie 180 with any grab, fakie 360 no grab.*
- *Front flip*
- *540 no grab, fakie 360 with any grab, back flip, front flip with a grab*
- *More advanced manoeuvres.*

9. Supervisor's Log Book and Session Report

- All water ramp supervisors should complete a session report (***Appendix 5)*** each time they supervise a session. This should be filed at the Water ramp and should be available for future reference.
- A note should be made of names of aerialists, number of jumps trained, quality of jumps, safety factors, and any other relevant incidents.

10. Types of Aerial Ski Manoeuvres – This section will be accompanied by video and/or diagrams.

- Straight jump – a vertical jump with no rotation and a straight shape in the air

- Spread Eagle – an upright jump with legs straight and apart, abducting from the mid-line in the frontal plane

- Twister – an upright jump where the body performs a twisted shape about the vertical axis in the air, so that upper and lower body are facing different directions for a period of time.

- Daffy – an upright jump where the legs remain straight, but separate in the air, with one leg forward and one backward. The legs abduct in the sagittal plane.

- Cossack – an upright jump like a 'Straddle' jump where the body moves into a forward piked position in the air with legs apart. Arms reach forwards, between the legs.

- Mule Kick – an upright jump where the knees bend and the skis come backwards and to one side of the body so that the skis are vertical.

- Zudnik – an upright jump which resembles a Cossack, except that the legs are together.

- Back Scratcher – an upright jump similar to the mule kick, except the legs are brought directly behind the body.

- Helicopter – an upright jump with a full twist. A double or triple heli would have the appropriate number of twists. Twist is rotation about the vertical axis.

- Front Tuck - a single forward somersault rotating about the transverse axis in a tucked position.

- Back Tuck – a single backward somersault rotating about the transverse axis in a tucked position.

- Back Layout – as a back tuck, but the body rotates in a straight position.

- Double back – Lay tuck – A double backward somersault with the first somersault in the straight position, and the second somersault tucked.

- Double back with twist – Lay Full, Half-half, Full in, Full Full, Full Double Full, Double Full Full. – These are double back somersaults with different combinations and degrees of twist.

- All water ramp supervisors should be able to identify these jumps.

- ***Snowboard jumps are listed in Appendix 10***

11. Life Saving and First Aid

- This section will contain procedures for rescue from the water, basic first aid, and will be taught by a qualified RLSS instructor. ***Appendix 6***
- All supervisors will be expected to participate in practical techniques.

12. Practical Introduction to Water Ramp and Jumping

- Demonstration of Jump site preparation
- Demonstration of Jump site procedures – OK signals and statements of "Jump is Clear" or\and Closed signals. – Arms make an O shape above the head for jump to be open and ready and arms are crossed above the head as a signal that the jump is not ready.
- Demonstration of equipment
- Demonstration of how to run a session.
- Practical supervision and assessment

13. Factors affecting Jumping

- Weather- jumping should never be undertaken if there is wind above Force 3. Jumping can take place in light rain – in fact the jump is well-lubricated then, but not in driving rain which is likely to affect vision. Aerialists should not get cold – Supervisors should constantly monitor for the signs of hypothermia- shivering, loss of concentration, blue lips,etc.
- Light – jumping should not take place if there is inadequate light ie the jumper cannot see the kicker and landing properly. I f floodlit jumping takes place, the floodlights must not interfere with the aerialist's vision AT ANY POINT DURING JUMP PREPARATION, TAKE-OFF, AIR, OR LANDING. A badly positioned spotlight could cause a jumper to become disorientated or blinded in the air and cause an accident.

14. Written Assessment

- All candidates will be assessed throughout the day on their competence to supervise adequately.
- All candidates will be given a written assessment at the end of the course. ***Appendix 7***

Code of usage for water ramps *Appendix 1*

General

- All participants must be competent skiers or snowboarders. They must have a minimum ability to be able to do a 90 degree jump turn on a 30 degree slope. They must be able to turn and stop from the full speed they generate on the in run.
- All participants must be able to swim.
- Each session is run by the designated supervisor. The supervisor will hold an ESC/SNSC water ramp supervisors qualification administered by SNSC or ESC.
- Aerialists jump one at a time.
- All aerialists must have completed a Permission to Jump form and have been provided with a log book in which their jumps are to be recorded by the Supervisor/Coach. This can only be completed on the day of jumping.

Physical Structure

- It is recommended that the facility be securely fenced off to prevent access by unauthorised persons, especially when the facility is unsupervised (ie. At night).
- It is recommended that a "Danger Deep Water" warning notice be clearly displayed
- A Life Buoy should be easily available at all times.

Supervisor

- The supervisor has responsibility to run the session, ensure safety code is adhered to and be prepared to act in case of an emergency.
- The supervisor needs to be aware of the potential danger of water ramping and do everything they can to avoid these dangers.
- The supervisor must be prepared to jump into the pool to pull out an aerialist in need of assistance. Therefore they need to be a competent swimmer when fully clothed.
- The supervisor must be prepared to enforce the safety code and be willing to stop anyone jumping who fails to comply with the rules and the authority of the supervisor.
- Keep the area around the kickers clear. If a jumper catches an edge on the in run they may deviate and miss the jump completely so the entire area must be clear except the supervisor or coaches who must be ready to move quickly out of the way.
- Check the landing is completely clear before giving a clear signal to the one jumper waiting to set off.
- Check the in run, transition and jumps are wet enough. Any dry spots can cause jumpers to crash.
- Check there are no sharp objects or obstructions on the in run or transition.
- The supervisor has the absolute right to suspend operation of the facility if circumstances dictate and to prevent any person jumping if their lack of skill or other problems are suspected of being such that they are likely to compromise safety.

Aerialists

- Must wear a helmet. Hard plastic exterior, high density foam padding.
- Ears should be covered to prevent bursting ear drums on a side impact.
- Must wear a flotation device like a water ski impact vest.
- Must wear a wet suit. This protects against enemas and bruising.
- Must only jump when cleared to do so by the supervisor.
- Must comply with instructions given by the supervisor.
- It is recommended that the skis or snowboard are attached to the jumper by a string or strap to prevent them becoming a danger should they release on the jump. This will also stop any equipment sinking if it releases on landing.
- Must be a capable skier or snowboarder as outlined above and be physically strong enough to handle to forces encountered. The aerialist's weight, speed, position and the type of kicker used will all effect the force exerted on the jumper.
- Must inform the supervisor of any physical ailments which may affect their jumping. Eg It is the duty of a deaf skier to inform the Water ramp supervisor of their deafness. A skier who feels unwell must notify the supervisor immediately and must cease jumping.
- A common mistake is hitting the kicker with back, hands or head when trying a backward somersault. This can be as a result of over rotating on the kicker or collapsing into it. It is important to keep firm body tension when performing aerials and to become airborne before any somersault is performed.
- Jumpers should try to keep dirt from entering the pool. Wash off any dirty boots before jumping.

First Aid

- There must be quick access to a qualified first aider and following safety items.

  Telephone for emergency calls. Neck brace. Back board. Lifesaving flotation ring. General first aid kit. Blankets to keep a wet casualty warm.
- If there is an accident the supervisor should call for immediate help. This will be the first aid officer on site or an ambulance by telephoning 999. Whenever possible wait for qualified assistance.
- An injured person should not be moved unless in immediate danger. In the case of water ramping the obvious danger is drowning. If the person is unconscious in the water then fast action will be needed to bring them to safety.
- **Spinal injury** is very rare and only caused when someone has had a serious impact with a hard surface. This is not likely from a water landing. If there is any suspicion that the unconscious person has suffered any spinal injury then it is vital that any movement of that person is minimized. The back board can be used to remove an unconscious person from the pool but should be done so by someone with appropriate training.
- Any jumper experiencing symptoms which could be spinal cord related should be seen in hospital. These include bad neck or back pain, weakness tingling - including shooting feeling down arms or legs or any odd altered sensation or loss of movement.

- If patient is **unconscious** check their airway is clear and patient is breathing. Do not move and keep warm with blankets.
- **Concussion** can occur after a blow to the head. It is possible to suffer concussion simply by hitting the water head first. If the jumper has hit his/her head on the kicker there is a danger of neck injury as well as head injury. The jumper may need rescue from the water. Mild concussion does not always manifest itself immediately so symptoms could be observed several hours after the crash. Symptoms of concussion are confusion and memory loss and can be very mild. Any jumper showing these symptoms should be seen by a doctor. Any jumper suffering a head injury causing Loss of Consciousness even only for a very short period of time should be seen in Accident and Emergency. Avoid alcohol after a concussion. In the hours after apparent recovery from a concussion any fitting, persistent vomiting, severe headache, dizziness, confusion strange behavior or loss of consciousness, difficulty seeing, walking or difficulty waking the patient, then call 999 for an ambulance.
- After a concussion it is advised that care is taken to avoid a repeated head injury for 2-3 weeks and so should not jump again during that time.
- A burst ear drum can occur when the ear impacts directly to the water without protection. Symptoms are acute pain and loss of balance. The person must stop jumping and protect the ear. A doctor should be seen that day.

ADDITIONS AND ACKNOWLEDGEMENTS

The SNSCs Policy on First Aid is:
'There is a requirement for persons in charge of others that they owe each member of the group a duty of care. The technical and leadership elements of this are examined in the SNSC qualification courses. The first aid and safety element should be gained through attending appropriate first aid training.
The first aid course must meet the requirements detailed below.

The First Aid training must be: a minimum of 12 hours/2 days
provided by an HSE approved centre
delivered by a qualified first aid instructor who must be registered with the HSE
include content relevant to the outdoors and mountain environment
renewed every three years

There are a number of organisations that can meet these requirements. The SNSC recommend British Association of Ski Patrollers (BASP) courses as the most suitable training for ski leaders, instructors and coaches. For more details contact the BASP Office on 01855 811 443, or e-mail skipatrol@basp.org.uk.

A First Aid course has been specially arranged for SNSC members on: 29-30 April 2000 in Edinburgh. The cost is £75. Each course will run from 9am-5pm each day. To book your place phone SNSC now on 0131 445 4151 or email: admin@snsc.demon.co.uk. "

Sarah Green wishes to thank the following for all their contributions/ help/advice/sense of humour/patience and tolerance in producing this course:-

Chris Bowes, Wendy Bowes, Donald Gordon, Sarah Lucas, Robin Wallace, Rob Morrison, Bruce Crawford, Kay Bates, Peter Bates, Hugh Hutchinson, other former members of the British Freestyle team, Sheffield Ski Village, and the Impington Village PE Department.

Appendix 2

One Star Award	Two Star Award	Three Star Award
Manoeuvres *Water Ramp* Straight Jump Spread Eagle Twister Daffy Cossack Mule Kick	**Manoeuvres** *Water Ramp* *Snow or Plastic* Zudnick Spread Eagle Back Scratcher Twister Helicopter Daffy Front Tuck A double combination upright	**Manoeuvres** *Water Ramp* Front Tuck – Must be Water qualified Back Tuck or Back Layout – Must be Water qualified A triple upright
Competition No competition experience necessary for this award	**Competition** No competition experience necessary for this award	**Competition** Participate in a Water Ramp or Upright Air competition as a registered skier.
Awareness Show awareness of safety equipment for Water Ramp training Read, learn, and be tested on the Water Ramp Rules of Use.	**Awareness** Show and display an understanding of good take-off technique and form in the air	**Awareness** Show an understanding of competition procedures
One Star Awarded on	**Two Star Awarded on**	**Three Star Awarded on**

Four Star Award	Five Star Award	
Manoeuvres *Water Ramp* — *Snow* Back Full - Water Qualified — Front Tuck – Snow Qualified Lay Tuck - Water Qualified — Back Tuck or Back Layout – Snow Qualified	**Manoeuvres** *Water Ramp* — *Snow* Any twisting double Somersault - Water Qualified — Back Full – Snow qualified Lay Tuck – Snow Qualified	**Notes –** **Allmanoeuvres should be performed consistently, at will, with correct technique, good form and safe landing.** **To water qualify any somersault, it must be performed 50 times to feet. This move may then be performed on snow.** **To snow qualify any somersault, it should be performed on snow, 3 times in a row with good take-off, form and landing. It may then be competed on snow.**
Competition Participate in aerials a competition on snow as a registered skier	**Competition** Participate in a C Level Competition on snow	
Awareness Show an awareness of scoring and tariff for aerials competition	**Awareness** Gain a Water Ramp Supervisor Qualification	
Four Star Awarded on	**Five Star Awarded on**	

PLEASE NOTE

INVERTED AERIAL MANOEUVRES SHOULD NEVER BE ATTEMPTED ON PLASTIC. ALL INVERTED MANOEUVRES SHOULD BE LEARNT ON A WATER RAMP, AND TRANSFERRED TO SNOW ONLY WHEN QUALIFIED TO DO SO BY AN ESC REGISTERED COACH OF THE APPROPRIATE LEVEL.

PERMISSION TO JUMP FORM

TO BE COMPLETED BY ALL SKIERS/SNOWBOARDERS ATTENDING AN ESC/SNSC WATER-RAMP INSTRUCTION CLINIC FOR THE FIRST TIME

Name.....Date of Birth.....

Address.....

I certify that the skier named above can perform these manoeuvres competently:

1. Schuss at speed with stability
2. Perform linked snowplough turns
3. Perform linked basic parallel turns
4. Perform a 90 jump around into the fall line (BOARDERS USE EQUIVALENT)
   OR
   Has performed an upright aerials jump at an appropriate facility.

Signed.....

Ski Instructor/Coach qualification.....

ALL SKIERS/BOARDERS WISHING TO PERFORM BACKWARD SOMERSAULTS

I certify that the skier/boarder named above can perform a back somersault competently on a trampoline

Signed.....

Trampoline coach qualification and BTF number.....

TO BE COMPLETED BY ALL SKIERS/BOARDERS

I certify that I have read the ramp code of use, I understand its implications, and agree to abide by its rules.
I am over 14 years of age or I am under 14 years of age and am a member of a Regional Ski/Snowboard Squad
I am fit and in good health

Signed.....

(To be signed by a Parent if skier / boarder is Under 18 years of age)

LOG BOOK FOR SKI AERIALISTS – Appendix 4

Name.....Date of Birth.....

Manoeuvre	Date First Performed	Date Qualified to Train on Water Ramp	Date Qualified to Train on Snow (50 good jumps)	Date Qualified to Compete on Snow (3 in a row to feet)	Signature of Coach
Basic Uprights					
Straight jump			NA	NA	
Spread Eagle			NA	NA	
Twister			NA	NA	
Daffy			NA	NA	
Cossack			NA	NA	
Mule Kick			NA	NA	
Zudnik			NA	NA	
Back Scratcher			NA	NA	
Multiple uprights and Helicopters					
Helicopter			NA	NA	
Double upright			NA	NA	
Triple upright			NA	NA	
Forward Somersault					
Front tuck					
Backward Somersault					
Back tuck					
Back layout					
Double Somersaults without twist					
Lay tuck					
Double Somersaults with twist					
Lay Full					
Full Full					
Half half					
Triple Somersaults					

LOG OF TRAINING SESSIONS

Date	Place of Training	Jump trained	Number of Times	Signature of Supervisor

WATER RAMP SESSION REPORT – *Appendix 5*

Date..... **Name of Supervisor.....**

Weather.....

Time Ramp Opened.....

Water Ramp Safety Checks - before jumping

Ramp Structure.....

Water Condition (including pumps).....

Condition of In-Run (Sprinkler system and matting).....

Life-Saving Equipment to hand.....

Jump closed at.....

AERIALISTS

Name of Aerialist					
Log book checked					
Jump qualification level for training					
Jump 1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
Log booked signed					

AERIALISTS

Name of Aerialist					
Log book checked					
Jump qualification level for training					
Jump 1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
Log booked signed					

AERIALISTS

Name of Aerialist					
Log book checked					
Jump qualification level for training					
Jump 1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
Log booked signed					

RISK ASSESSMENT FOR AERIALS

MANEUVER	RISK IN AERIALS	CONSEQUENCE	ACTION TO BE TAKEN
All	Straining of muscles and ligaments	Injury	Warm up before freestyling. Warm up further by carrying out maneuvers which do not stress the body too much. If anything is tight or pulling warm up further before continuing.
All	Becoming tired/fatigued	Failed jump	Stop practice to prevent skiing while body not at peak performance
Upright aerials	Becoming unstable in flight	Injury	Gradually build up height. Look ahead and pop cleanly. Instructor to give immediate feed back to prevent repeated instability resulting in an accident
Aerials landing	High shock loading	Repetitive strain injury	Reduce height of flight. Limit exposure to jumping to allow body to recover.
Water ramp	Drowning	Death	Ensure positive buoyancy with full kit Ensure recovery procedure in place to quickly recover skiers from water where necessary Ensure landing area clear of submerged obstacles
	Hydraulic shock	Burst ear drums Enemas	Wear protection over ears Wear wet suit bottoms

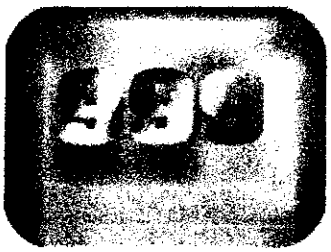
Water ramp mist system operating procedure

1. Turn on the mains water located under the sink in the hut next to the Children's play area.
2. Turn on the power at the fuse board located at the far end of the pump house. The switch is marked (mist system)
3. There are two taps located on the side of the big ramp, one marked (small ramp) one marked (big ramp) Select which ramp you wish to use and turn the tap on anti-clockwise. Note: both ramps can be misted at the same time if required
4. Finally press the green button located to the left of the timber decking. To switch of press the red button
5. When you have finished with the ramp close the system down following this procedure in reverse.
6. Note: Please conserve water switch system off when not in use.

Appendix 10

AERIAL TRICK LISTING – SNOWBOARDERS

No.	Name	Grab	Where	B/TW	Extra
1	OLLIE	--	--	--	BASIC JUMP
2	CHIMP	--	--	--	CURL ARMS AND BEND LEGS LIKE A MONKEY
3	B/SIDE SHIFTY	--	--	F (MIN)	ROTATE BOARD UP TO 90° B/S FACING FORWARD AND RETUI
4	F/ SIDE SHIFTY	--	--	F (MED)	ROTATE BOARD UP TO 90° F/S FACING FORWARD AND RETURI
5	TRAVOLTA	--	--	--	RAISE 1 ARM STRAIGHT UP POINT UP AND GRAB CROTCH
6	TOURIST	--	--	--	RAISE BOTH ARMS AND PULL BOARD BEHIND BACK
7	SYRINGE	--	--	BOTH	STRAIGHTEN WHOLE BODY ARMS DOWN BY SIDES
8	TAIL GRAB	RH	T	OPTION	NO BONE = "STINKY" BONE = "NOSE BONE"
9	CROSS BONE TAIL GRAB	RH	T	F	AS ABOVE WITH B/SIDE SHIFTY
10	TINDY	RH	TT	OPTION	NO BONE = "STINKY" BONE = "NOSE BONE"
11	CROSS BONE TINDY	RH	TT	F	AS ABOVE WITH B/SIDE SHIFTY
12	INDY	RH	TMB/TMA	OPTION	BONING - UP TO INDIVIDUAL TASTE
13	CROSS BONE INDY	RH	TMB/TMA	F	AS ABOVE WITH B/SIDE SHIFTY
14	STIFFIE (INDY GRAB)	RH	TMB	BOTH	GRAB INDY AND STRAIGHTEN BOTH LEGS LATE
	CRAIL	RH	TN	R	BONING - UP TO INDIVIDUAL TASTE
16	CRAIL NOSE GRAB	RH	N	R	BONING - UP TO INDIVIDUAL TASTE
17	NUCLEAR	RH	HN	R	BONING - UP TO INDIVIDUAL TASTE
18	ROAST BEEF	RH	HMB	OPTION	ELBOW POINTING IN BONING - UP TO INDIVIDUAL TASTE
19	CHICKEN SALAD	RH	HMB	OPTION	ELBOW POINTING OUT BONING - UP TO INDIVIDUAL TASTE
20	STALE FISH	RH	HMA	F	BONING - UP TO INDIVIDUAL TASTE
21	TAIL FISH	RH	HT	F	BONING - UP TO INDIVIDUAL TASTE
22	FRONT HAND TAIL GRAB	FH	T	F	BONING - UP TO INDIVIDUAL TASTE
23	ICE PICK	FH	TT	F	SOMETIMES TMB GRAB – BONE FRONT LEG FULLY
24	MUTE	FH	TMB/TMA	--	TMA = "TUCK KNEE" TMB = "MUTE" (NORMAL)
25	STIFFIE (MUTE GRAB)	FH	TMB	BOTH	GRAB MUTE THEN STRAIGHTEN BOTH LEGS LATE
26	MUTE JAPAN	FH	TMB/TMA	BOTH	GRAB MUTE AND PULL BOTH LEGS BETIND YOU
27	MUTANT JAPAN	FH	TN	R	GRAB MUTE AND STRAIGHTEN REAR LEG TOWARDS GROUND
28	NOSE GRAB	FH	N	OPTION	NO BONE = "STINKY" BONE = "TAIL BONE"
29	METHOD	FH	HN	BOTH	PULL BOTH LEGS UP BEHIND YOU
30	PALM AIR	FH	HN	BOTH	METHOD WITH 90° B/S SHIFTY (REAR LEG MAY DROP)
31	"STEVE GRAHAM" METHOD	FH	HMA	BOTH/F	PULL BOTH LEGS UP BEHIND YOU WHILE BONING FRONT ONE
	MELLON	FH	HMA	F	BONE FONT LEG AND HOLD OR DOUBLE BONE
33	CROSS BONE MELLON	FH	HMA	F	AS ABOVE WITH B/SIDE SHIFTY
34	CROOKED COP	FH	HMA	F	AS ABOVE WITH B/SIDE SHIFTY
35	BACKSCRATCHER	FH	TMA	BOTH	LEGS AS METHOD BUT REACH OVER BASE TO GRAB TMA
36	VK (FRONT HAND ROST BEEF)	FH	HMB	OPTION	ELBOW POINTING IN BONING - UP TO INDIVIDUAL TASTE
37	LETTUCE (F/HAND C/SALAD)	FH	HMB	OPTION	ELBOW POINTING OUT BONING - UP TO INDIVIDUAL TASTE
38	ROCKET	BOTH	N	R	UNLESS LONG ARMED REAR LEG WILL HAVE TO BE BONED
39	CROSS HAND ROCKET	BOTH	N	R	HANDS CROSSED OVER THE NOSE
40	TWO HAND STIFFIE	BOTH	TMB	BOTH	AS STIFFIE BUT TWO HANDED
41	TWO HANDED METHOD	BOTH	HN+HT	BOTH	AS METHOD BUT TWO HANDED
42	TWO HANDED BACKSCRATCHER	BOTH	TN+TT	BOTH	AS BACKSCRACTCHER BUT TWO HANDED
43	TWO HANDED INDY	BOTH	TMB	BOTH	AS INDY BUT TWO HANDED
44	STEERING WHEEL	BOTH	TMB+HMB	OPTION	BONING IS POSSIBLE BUT SHIFTIES ARE PERFERED
45	TWO HANDED TAIL GRAB	BOTH	T	F	UNLESS LONG ARMED FRONT LEG WILL HAVE TO BE BONED
46	CROSS TWO HANDED TAIL GRAB	BOTH	T	F	HANDS CROSSED OVER ON TAIL (AS ABOVE)
47	TAIPAN (F/HAND)	FH	TMA	OPTION	PUT HANDS THROUGH LEGS FROM BEHIND AND GRAB TMA
48	TAIPAN (R/HAND)	RH	TMA	OPTION	PUT HANDS THROUGH LEGS FROM BEHIND AND GRAB TMA



999 HYPOTHERMIA - IMMERSION IN COLD WATER

Falling into cold water is one of the greatest shocks the human body can experience. Although there are extraordinary stories of survival after many hours of immersion, deaths from drowning often happen very quickly.

BACKGROUND INFORMATION

Two thirds of all people who drown, do so within six metres of safety. A good swimmer would probably think they could fall into a canal and easily swim to the edge. But many competent swimmers underestimate the effects of cold water shock which can dramatically affect their survival. Hypothermia causes a person to lose consciousness at around 33 degrees Celcius and they drown because they are unable to keep their head and face out of the water.

Normal body temperature is 37 degrees C or 98.6F. Hypothermia is defined as a fall in body temperature to below 35 degrees C or 95 degrees F

The summer sea temperature around Britain is around 15 degrees C. An unprotected adult of average weight will cool to dangerous levels within 2-6 hours. A thin person will reach this critical level in one hour but a fatter person, with layers of protective insulating fat, can survive longer. Children, especially boys, are at risk within half-an-hour of immersion. Survival times are increased if thick conventional clothing as well as a life jacket are worn.

Symptoms of Immersion Hypothermia.

- Intense shivering
- Feeling very cold especially in abdomen and armpits
- Initial rapid increase in heart rate and breathing rate as body tries to deal with cold water
- Drop in heart-rate as condition becomes more serious
- Decreased breathing rate
- Loss of control of movement - due to stiffness of limbs and joints
- Slurred speech
- Irrational behaviour
- Drowsiness
- Unconsciousness - as person gets colder and temperature drops towards 30 degrees C
- Heart eventually stops at about 26-24 degrees C

Treatment

- Get the patient into warm surroundings as quickly as possible.
- Cardiac massage should be given, at half the rate, if the patient's heart has stopped.
- Patient can be put into warm water (approx. 40 degrees C) even if they seem lifeless. (In most cases this brings immediate recovery but should be stopped as soon as the patient starts to recover. Excessive re-warming can be harmful.
- Keep patient flat and warm under blankets and allow to re-warm slowly.

Survival Advice
Hypothermia the facts, causes and warning signs.

Other advice from the series

HOME

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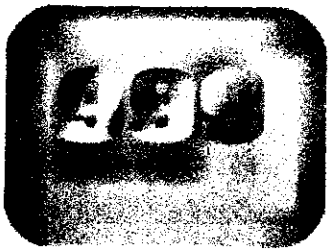

999 HYPOTHERMIA

Many people aren't prepared if they get stuck in winter conditions either in a car or out on their own. In this 999 demonstration our stuntman is outside, in mid winter, wearing only light clothing. How do the mind and body react as body temperature drops towards the threshold of hypothermia?

HYPOTHERMIA - THE FACTS

Hypothermia - exposure to extreme cold - is defined as a fall in body temperature to below 35 degrees C or 95 degrees F.

Every year more than 200 people in Britain die from hypothermia. If your core temperature, that's the temperature inside your body, drops by only 2 degrees Centigrade, then hypothermia begins. Temperature extremes can only be tolerated for a limited period unless there is some protection provided by shelter and adequate clothing in the cold.

Hypothermia is a condition that at best can be damaging to a person's health and at worst can prove fatal.

Causes of Hypothermia

Hypothermia can develop in people of all ages following exposure to cold outdoor weather, especially if they are caught in snow, rain and wind or immersed in cold water. Severe cold can overwhelm the body's defences and destroy heat balance. Hypothermia can also develop in

moderately cold conditions if clothing is damp or wet as this accelerates heat loss. Hypothermia can occur quickly or over several hours.

Hypothermia can occur at any time of the year and in sub-zero temperatures in may be only minutes away.

Warning signs of Hypothermia

Shivering, feeling very cold, slurred speech, lethargy, irrational behaviour or confusion, lack of co-ordination and signs of muscular weakness (a person may stumble or fall.)

Shivering is a good sign which means the body is trying to warm itself. If you stop shivering it means your body is not responding to cold and you don't have enough energy left to shiver. Then hypothermia becomes a dangerous possibility.

Even though his temperature had only fallen by half a degree, our stuntman, Mark Cass, took twice as long to complete a mental test and three times longer to do a physical manipulation test. Walking did not warm him up, instead his core temperature started dropping quickly.

Prevention of Hypothermia

- Cover the head with a hat. (20% of heat loss occurs through the head).
- Cover nose and mouth with a scarf to reduce heat loss through breathing.
- Clothes should be sufficient to insulate, to protect against the wet and be windproof.
- Seek shelter or dig a snow hole. Still air surrounded by snow insulates against cold.
- If you are driving - stay in the car, it acts like a snow hole.
- Carry extra blankets in the car.
- Surround the body with a shiny metallic material which reflects heat back to the body.
- Take warm drinks.

Don't leave your car. It provides protection. Stay with the car and wait for help

~~wrap the car and wait for help.~~

The best way to keep warm is to start the engine for 10 minutes in every hour. If the snow is drifting take care that your exhaust is clear or there is a danger of carbon monoxide poisoning.

Curl up on the back seat with your arms around your shins as this helps to conserve body heat. Warm blood will not be pumping to your extremities so keep feet/hands/head warm.

Wrap anything around you to keep warm. If you are with others, huddling together will increase insulation and conserve heat.

If you find someone suffering from hypothermia get medical help immediately.

Hypothermia - Immersion in cold water

Other advice from the series

HOME

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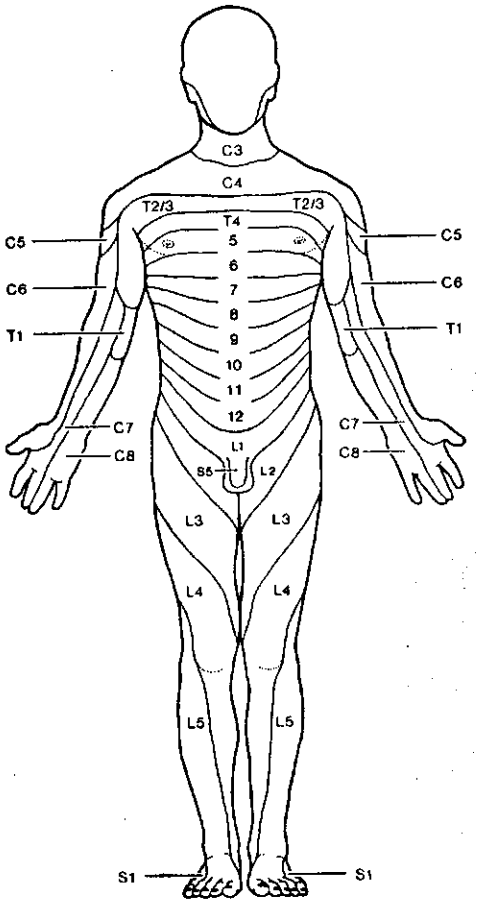
FIGURE 8-4 RECOGNITION OF SPINAL INJURY



Signs of injury to the spinal cord

Damage to the spinal cord may result in either permanent or temporary paralysis, which may be partial or complete.

Signs and symptoms

Signs and symptoms include pain caused by the impact, such as:

- bruising of the head and/or neck;
- pain in the neck.

the results of incorrect or inappropriate transmission of nerve signals, such as:

- lack of movement of one or more limbs;
- disorientation or bewilderment;
- numbness or tingling in the limbs.

The serious consequences of damage to the central nervous system mean that careful handling, lifting and moving are essential when dealing with spinal injuries.

This body outline indicates the areas of the body affected by damage to groups of vertebrae.

C 1–7 CERVICAL
T 1–12 THORACIC
L 1–5 LUMBAR

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Vertebral dislocation

As we have seen, the spine is a column of bones held together by discs of cartilage or ligaments. If these ligaments are torn, one bone can move forwards or backwards in relation to the other. Although the canal in each individual vertebra remains the correct size, the shift of position reduces the size of the canal between the vertebrae so the spinal cord is crushed. In extreme cases, the ligaments can be so badly damaged that only spasm of the muscles holds the spine together.

If the ligaments at the back of the vertebrae are torn, the vertebra above usually slides forwards over the vertebra below. If the ligaments at the front are torn, the upper vertebra usually slides backwards over the vertebra below. In either case, the canal will be compromised and the spinal cord crushed.

Flexion injuries

When the head is forced forwards, the ligaments are stretched and torn at the back. This is called a flexion injury.

Extension injuries

If the head is forced backwards, the ligaments at the front are torn and the bones can slide backwards. This is called an extension injury. If the head is forced back further, the damage will be increased.

STABILISING THE HEAD

Moving the head in the same direction as the original injury can cause further damage to the spinal cord. To prevent aggravating the injury, the casualty's head must be maintained in a neutral position. It must not be allowed to bend forwards, backwards, sideways, or be twisted.

Only if the casualty's head remains in a neutral position will the canal be likely to retain the maximum possible size thus minimising spinal cord compression. The neutral position helps prevent vertebra sliding either forwards or backwards and reduces the chance of fractured fragments of a vertebra damaging the spinal cord.

Stabilising the entire spine

One of the problems of suspected spinal injuries is that lifeguards can't be certain which part of the spine has been damaged. Although the cervical spine should be dealt with first, the rest of the spine should be stabilised as soon as possible. In deep water, the body's natural buoyancy may help to provide stability. But once the casualty has reached a point of support, it is important that additional support is given to the spine. When casualties with suspected spinal injuries are removed from the water, it is vital they are maintained in a horizontal position. Conventional lifts, most of which result in vertical movement out of the water, can have disastrous consequences.

For instance, attempting to lift a casualty by the armpits will place great strain on the spinal column as the weight of the lower body and legs becomes unsupported by the water. The unstabilised head is liable to move causing further injury. And lifting the casualty vertically can lead to a sudden drop in blood pressure which can result in cardiac arrest.

Summary

In summary, the spine is made up of individual vertebrae and houses the spinal cord. The spinal cord is the centre of the nervous system and damage to it can result in paralysis. Injury can occur anywhere along the length of the spine.

Spinal damage can take the form of flexion injuries, compression injuries or extension injuries. It may be impossible for lifeguards to tell which sort of injury has occurred.

The first priority in successfully managing a spinal injury is to stabilise the casualty's head.

The second priority is to maintain the casualty in a horizontal position.

INCIDENT MANAGEMENT

A LIFEGUARD'S FIRST PRIORITY MUST BE TO SAVE LIFE

Sometimes there may be a conflict between the need to stabilise casualties with suspected spinal injuries and the need to save their life. For instance, a casualty may fall from a diving platform, hitting the edge of the pool before falling face down into the water. The casualty must obviously be turned face-up as soon as possible and, if not breathing, be given rescue breathing. Opening the airway to allow the casualty to breathe may mean moving the head thus aggravating a suspected spinal injury.

Action to resuscitate a casualty with a suspected spinal injury may result in paralysis. Failure to attempt resuscitation will result in death. Lifeguards must base their decision on the priority of saving life.

EMERGENCY ACTION

Emergency action must be in accordance with the pool's EAP and should be based on teamwork. The overriding considerations are:

- ensuring a clear airway;
- stabilising the head;
- maintaining the casualty in a horizontal position; and
- immobilising the spine.

In the notes below, we assume that the casualty is in the water. Both the 'vice grip' and the 'bear hug' described below are intended to prevent forward, backward, lateral or twisting movement of the head and neck.

If the casualty is in deep water, they should be 'trawled' to a point where the lifeguard can stand comfortably.

In Foundation Module training and in the notes below, a team is assumed to consist of at least four trained people, two of whom must be qualified lifeguards.

If a spine board is used to remove a casualty from the water, stabilising the casualty's head and neck is still the priority (Fig. 8-5).

THE VICE GRIP (CASUALTY FACE DOWN)

The lifeguard should approach the casualty from one side to secure their head, neck and torso in the vice grip.

Reach under the casualty, taking care to go round their near arm rather than under it. Place your forearm along the line of the casualty's sternum (breastbone), supporting their chin securely with your thumb and fingers either side of the jaw.

Place your other forearm in the corresponding position along the casualty's spine. Your fingers should be outstretched on the back of the head, clamping it securely from behind. Aim to make your arm actions simultaneous (Fig. 8-6 A).

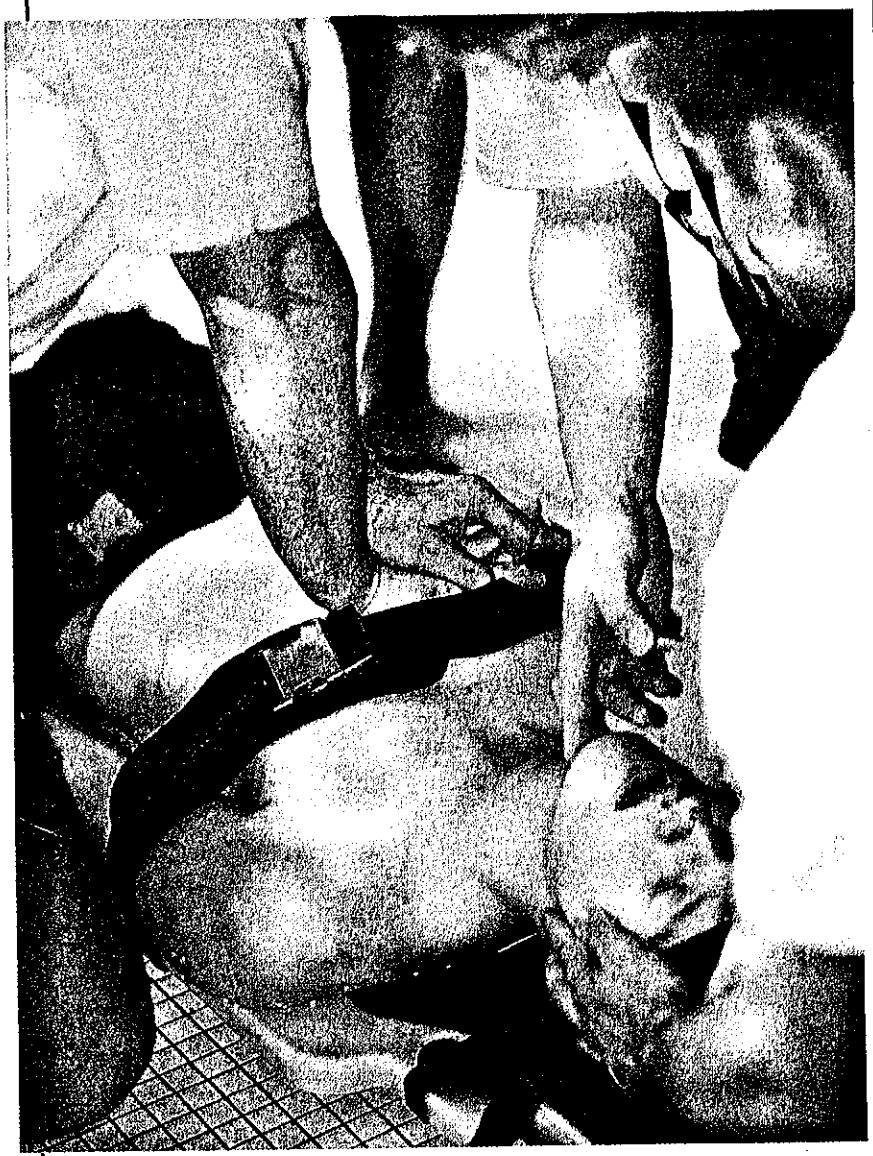
Always place the elbows in position first, to ensure a secure position for your hands which have to stabilise the casualty's neck.

Keep your fingers, hands, wrists and elbows rigid; your elbows and forearms should be gently but firmly pressed together like a vice holding an object between its jaws.

Secured in the vice grip, the casualty can be turned face up. To do so, the lifeguard must slide beneath the casualty under the water. Maintaining the vice grip to prevent movement of the head or spine, the casualty can be slowly rolled face up on to the surface of the water (Fig. 8-6 B).

If the water is deeper than standing depth, the lifeguard will need to kick hard to ensure that the casualty is not pulled below the surface.

FIGURE 8-5
CPR FOR A SPINAL CASUALTY.



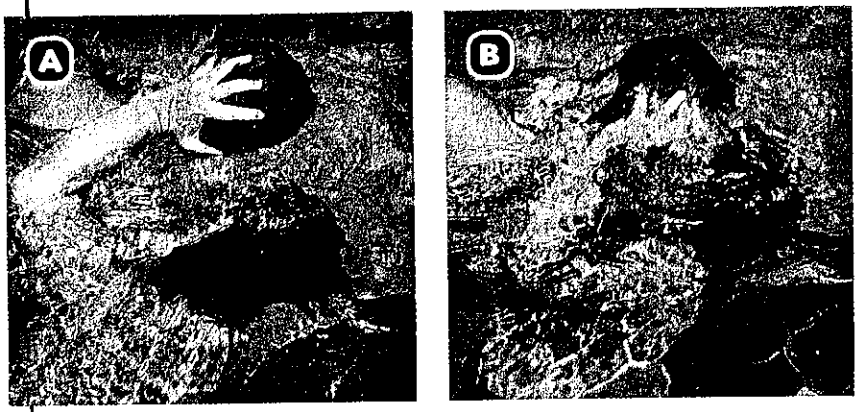


FIGURE 8-6
A VICE GRIP WITH BOTH ARMS.
B VICE GRIP, TURNING THE CASUALTY.

FIGURE 8-7
APPLYING THE VICE GRIP.

FIGURE 8-8
SECURING THE HEAD.

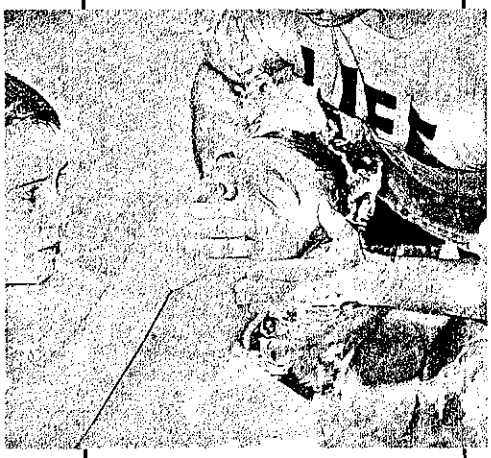


FIGURE 8-9
RELEASING THE VICE GRIP AND SUPPORTING CASUALTY.

THE VICE GRIP (CASUALTY FACE UP)

Occasionally, a casualty may be face up in the water. The lifeguard should approach the casualty from one side to secure their head, neck and torso in the vice grip as above. This time, however, the lower arm should be placed into position first. It is important to ensure that the grip is secured in such a way that there is no movement of the head or neck in relation to the torso (Fig. 8-7).

ASSISTANCE TO STABILISE CASUALTIES

Maintaining the vice grip is physically very demanding and assistance is needed as soon as possible. Additional support should be given by at least two trained people, at least one of whom must be a qualified lifeguard.

The rescuing lifeguard should direct the second lifeguard to stand at the casualty's head and place one hand gently but firmly on each side of the head, so that the forefinger and thumb are above and below the casualty's ears (Fig. 8-8).

Without releasing the vice grip, the rescuing lifeguard should instruct another trained person to gently support the base of the spine and buttocks with his forearms.

The rescuing lifeguard can then remove the upper hand from the sternum and place the forearm, with hand palm down, under the middle of the casualty's back. The rescuing lifeguard's other hand can be removed from its position down the line of the spine and placed under the casualty's shoulders (Fig. 8-9).

It is essential that stabilisation is maintained throughout the changing of hand positions.

Once a trained person is available they should provide additional support to the lower limbs by placing their forearms under the back of the ankles and calves.

Once stabilised in this position; the casualty is ready to be removed from the water. This should be done as quickly as possible to prevent the onset of hypothermia and to allow cardio pulmonary resuscitation if it is necessary.

THE BEAR HUG (CASUALTY FACE DOWN)

It is extremely difficult (though not impossible) for a lifeguard to apply the vice grip and turn the casualty in shallow water.

If the water is less than about 0.7 metres (2 ft 6 ins), the bear hug technique should be used to turn and secure the casualty.

This technique relies on the support of the lifeguard team. It is essential that at least two team members are in the water before one lifeguard uses this method to secure and turn a face down casualty.

The rescuing lifeguard should approach the casualty from one side, lean over the casualty and slide the arms under the casualty's armpits. The hands are then stretched upwards to grasp the casualty's head on each side. The fingers should be outstretched and the thumb and forefinger placed above and below the casualty's ears (Fig. 8-10 A).

The casualty's head and neck are stabilised by locking the fingers, wrists, forearms and elbows. Gentle pressure should be applied to either side of the casualty's head and torso.

The casualty can then be turned face up by the lifeguard dropping one shoulder and using the opposite leg to push off, rolling under the casualty (Fig. 8-10 B). The lifeguard may be lying on the pool bottom with the casualty on top, the casualty's head and neck secured by the bear hug grip.

The lifeguard will now be submerged under the casualty. It is vital that other team members immediately provide support to the casualty's head and upper torso.

Once the casualty is lying face up, the second lifeguard should place his hands on top of the first lifeguard's hands either side of the casualty's head (Fig. 8-10 C). At the same time, another lifeguard or trained person should gently support the casualty's lower back and buttocks. This is primarily a sliding action without losing hold of the casualty.

When the first lifeguard sees that the additional support for the casualty's head is in place and can feel that the lower back and buttocks are supported, he can begin to relax the bear hug and gently slide his hands out from underneath the hands of the second lifeguard. He can then slide slowly out, sideways, from under the casualty (Fig. 8-10 D).

Should the trained person not arrive at the scene until the rescue is underway, the rescuing lifeguard may need to move out from under the casualty. This should not be attempted before the casualty's head has been supported. Once out from under the casualty, the rescuing lifeguard should position himself to maintain support to the back and buttocks while awaiting the arrival of a third team member.

Lifeguards must decide whether the water is too shallow for either the vice grip or the bear hug to be used. If the water is too shallow it may be necessary to use the log roll.

LOG ROLL

If casualties vomit, whether or not they are on a spine board, they should be turned onto their side. Log rolling is the method of turning a casualty onto one side by moving the head, neck, torso and hips as one, keeping them in line (Fig. 8-11).

Depending on the size of the casualty, as many as six team members may be needed. It is essential that lifeguards are trained in undertaking this manoeuvre.

FIGURE 8-10
A RESCUING LIFEGUARD IN POSITION.
B TURNING THE CASUALTY.
C LIFEGUARD UNDER CASUALTY.
D LIFEGUARD SURFACES HOLDING CASUALTY.

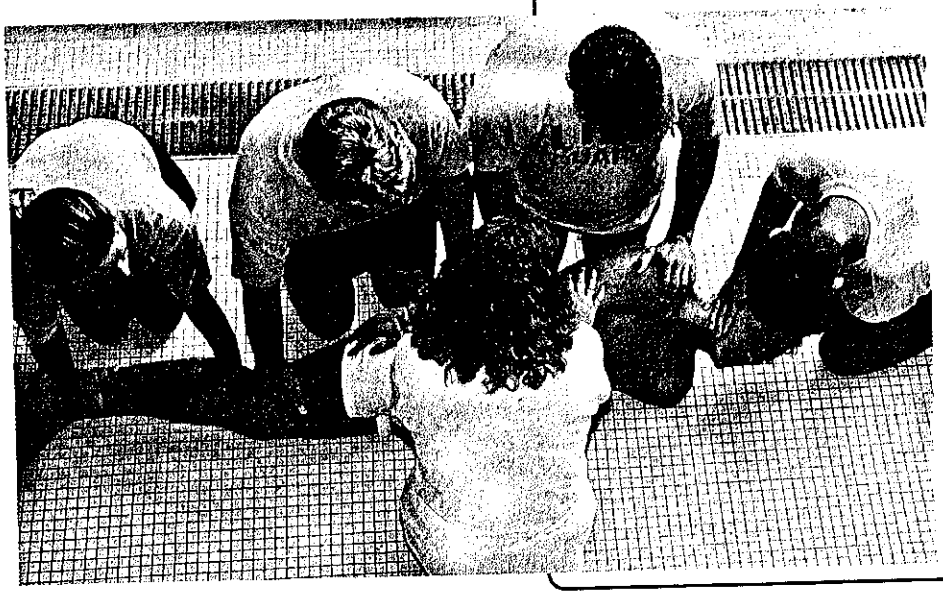
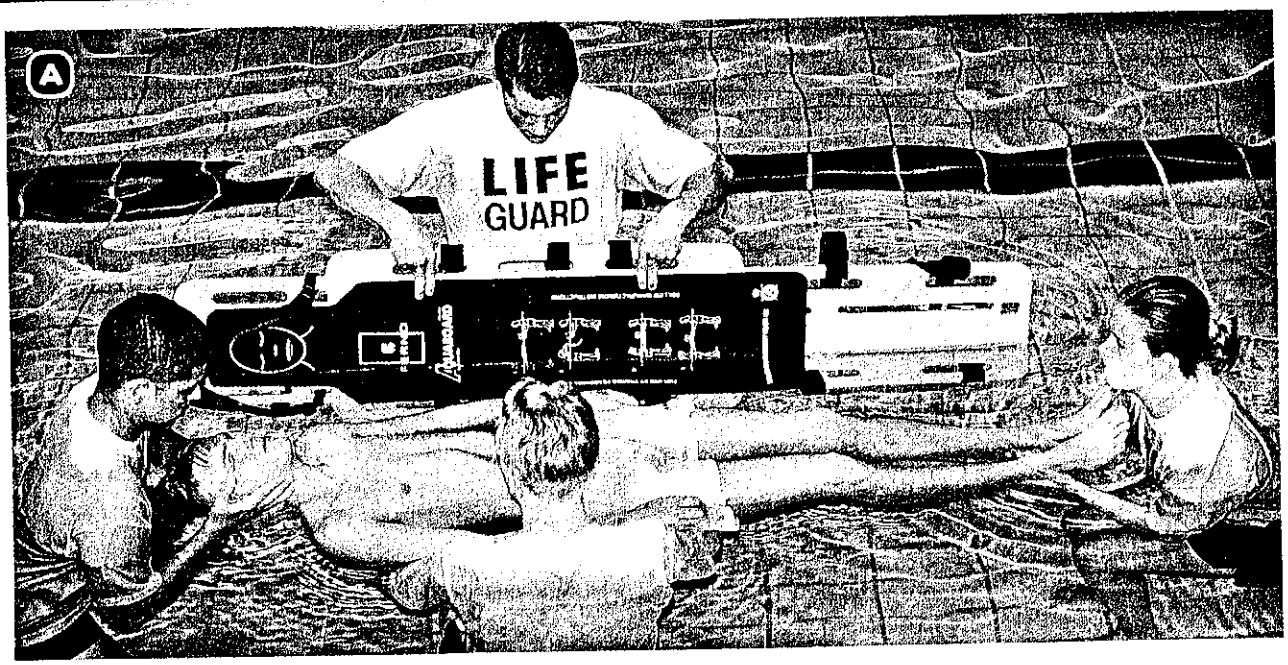
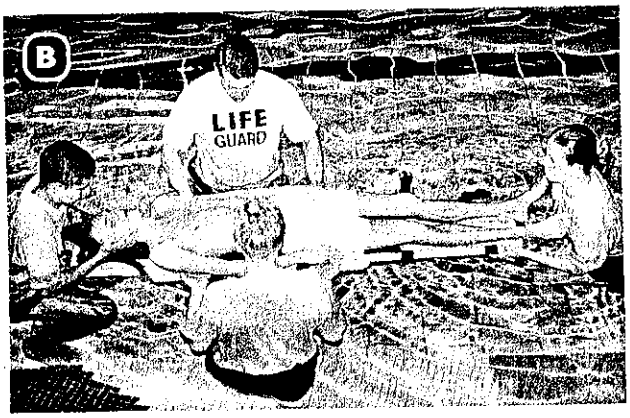
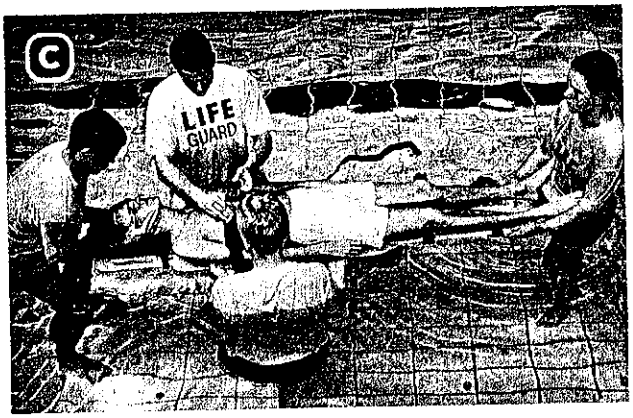


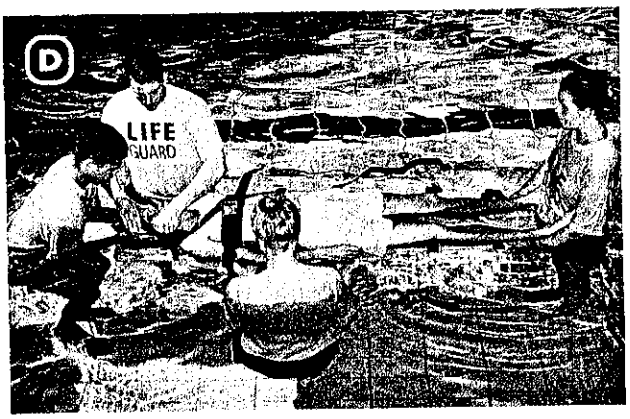
FIGURE 8-11
LOG ROLL – AN ADDITIONAL LIFEGUARD MAY BE NEEDED IN FRONT OF THE CASUALTY.

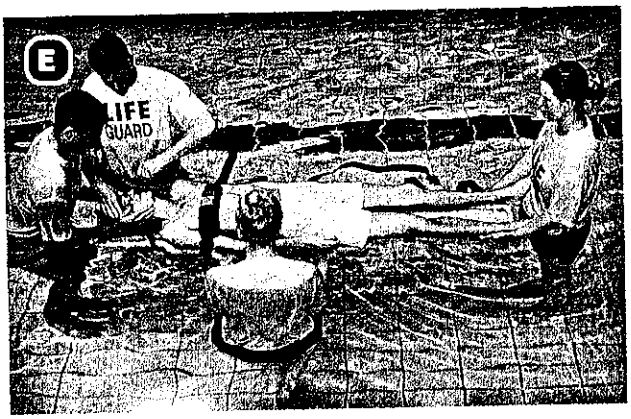
FIGURE 8-13
RECOVERY WITH A SPINE BOARD











A PLACE THE SPINE BOARD ALONGSIDE CASUALTY. B REMOVE THE HANDS AFTER CASUALTY IS ON BOARD. C SECURING THE FIRST 'GREEN' STRAP. D POSITIONING THE HEAD RESTRAINT STRAP. E TAKE CARE TO KEEP THE HEAD STEADY.

Once the head restraint is in place and correctly adjusted, the other coloured buckles can be secured and the straps tightened in the same order in which they were fastened (Fig. 8-14). The casualty is now ready to be removed from the water by the team.

FIGURE 8-14
SECURE THE REMAINING STRAPS IN SEQUENCE.

REMOVING THE CASUALTY FROM THE WATER

The casualty must be removed from the water in a horizontal position. One team member should be on the pool side ready to receive the board as it comes out of the water. Two team members should support the head end of the board as this is the heavier end. The fourth team member should support the foot of the board. The team leader should be responsible for co-ordinating the manoeuvre and giving instructions (Fig. 8-15).

The recovery sequence is:

- place the head end of the board at right angles to the edge of the pool;
- on a count of 'three', lift the board and place the head end on the pool side;
- keep the board level; and
- gently slide the board fully onto the pool side (Fig. 8-16).

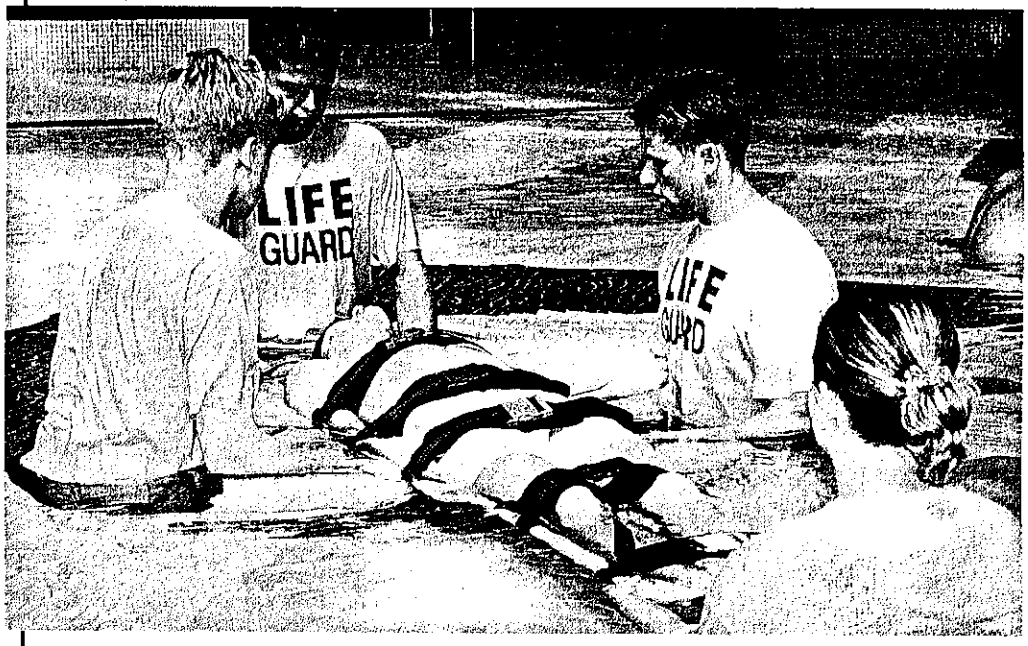


FIGURE 8-15
MOVING TO THE POOL SIDE.

FIGURE 8-16
GENTLY SLIDING THE BOARD ONTO THE POOL SIDE.

Once the board is on the pool side, it should be moved away from the water and resuscitation started if necessary (Fig. 8-17).

Lifeguards should remember that the casualty will feel extremely vulnerable while strapped on the board. The casualty will also require aftercare and treatment for shock.

If resuscitation is required, an open airway may be achieved by a combination of chin lift and carefully controlled head tilt. To minimise movement, these actions should be undertaken by two lifeguards (Fig. 8-18).

Although we have looked at rescues and recoveries with a team of four trained people, in many cases more team members may be available. This situation will be covered by the EAP at the specific pool and covered by in-service training.

RECOVERY WITHOUT A SPINE BOARD

In some circumstances, casualties with suspected spinal injuries may need to be removed from the water without a spine board.

Unless the casualty is very small, this needs at least two lifeguards and two trained people in the water with a further trained person on the pool side.

First, the casualty needs to be stabilised and supported in water no more than waist deep, as described above. The casualty should be horizontal, face up and parallel to the edge of the pool (Fig. 8-19). The positions of the five team members are:

- **Lifeguard A** should hold the casualty's head and stabilise it;
- **Lifeguard B** should be at the casualty's shoulders, supporting the upper part of the back;
- **Trained person C** should be at the casualty's hips, supporting the buttocks and lower spine;
- **Trained person D** should be at the casualty's legs, supporting them; and
- **Trained person E** should be on the pool side (Fig. 8-20).

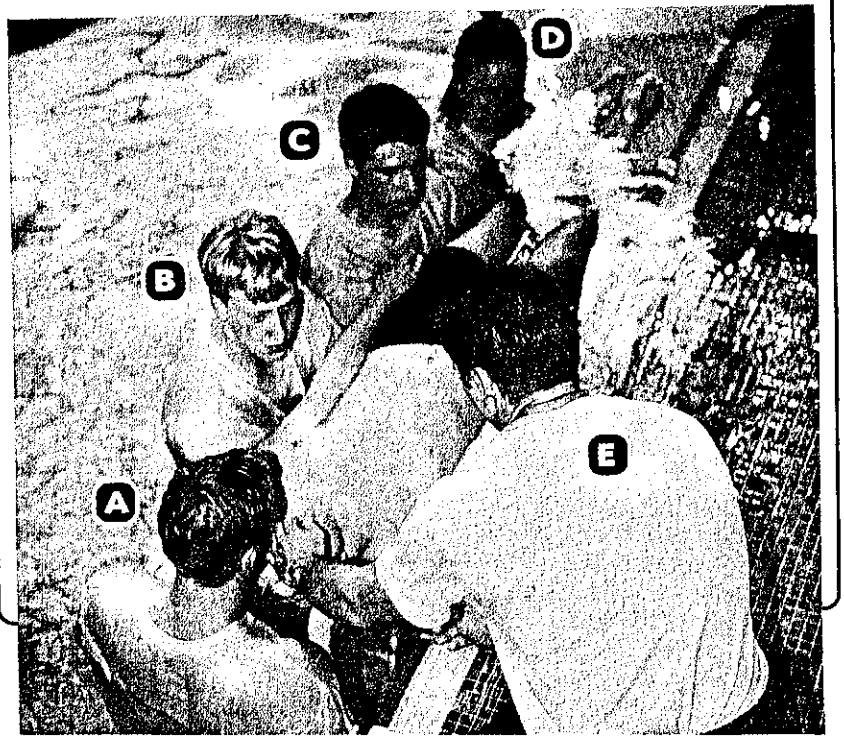
Lifeguard B (the one supporting the upper part of the casualty's back) should control the recovery of the casualty throughout the manoeuvre.

FIGURE 8-17
THE BOARD ON THE POOL SIDE.

FIGURE 8-18
RESCUE BREATHING CAN BE GIVEN IF NEEDED.

FIGURE 8-19 PREPARING TO HORIZONTAL LIFT.

FIGURE 8-20 POSITION OF LIFEGUARDS BEFORE THE LIFT.



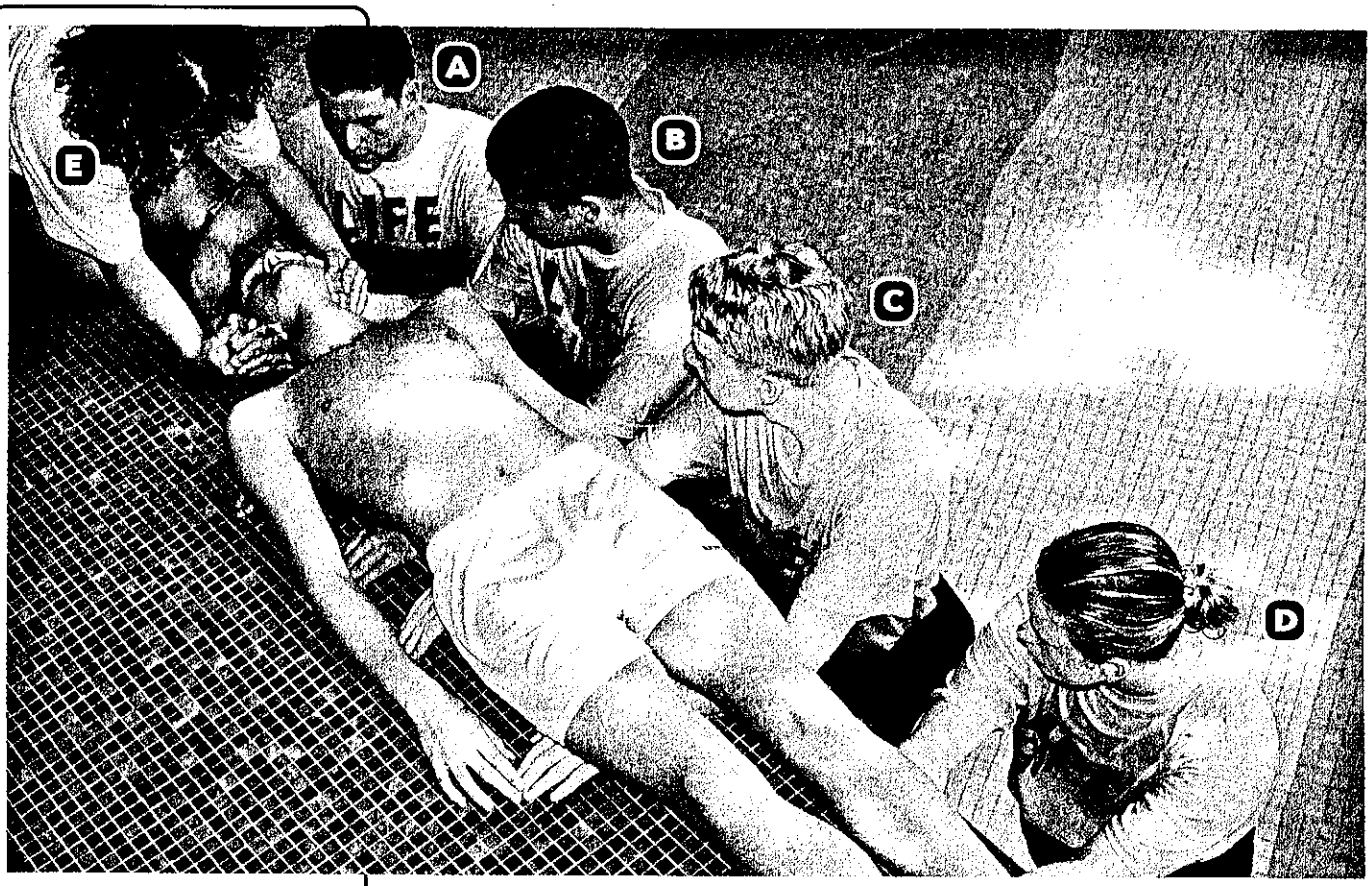


FIGURE 8-21
THE HORIZONTAL LIFT.

It is very important that the casualty stays horizontal throughout the lift. Lifeguard B should ensure that trained people C and D are adequately supporting the casualty on their forearms (Fig. 8-21).

When lifeguard B is ready, he should give the instruction to lift the casualty out of the water.

As the casualty is moved onto the pool side, trained person E should take over support of the casualty's head from lifeguard A. Trained person E should position the hands over lifeguard A' s hands. Then lifeguard A can remove his hands gently by sliding them out from under the casualty.

In the final stage of the recovery, lifeguard B and trained people C and D can slide their arms and hands out from under the casualty. Trained person D removes his hands first, then C and finally lifeguard B. Once all the supporting hands have been removed, trained person E remains in the supporting position at the casualty's head with firm control (Fig. 8-22).

FIGURE 8-22
LIFEGUARDS REMOVING ARMS FROM UNDER THE CASUALTY.

SAFETY DURING SPINAL RESCUES

As we have discussed in Chapter Five, poor lifting technique can cause injuries to the rescuer as well as the casualty. Lifeguards should be aware of this risk and always lift in such a way as to minimise it. They should also be aware of the provisions of the Manual Handling of Loads legislation and the other legal obligations set out in Chapter One.

At some pools, a high freeboard (the distance between water level and the pool side) may make it very difficult to lift a casualty horizontally without a spine board. This problem should be addressed by the pool operator and be covered by the pool's EAP. Even with the casualty on a spine board, high freeboard is still a problem and may call for additional team support. For instance, it is recommended that two people should be on the pool side to accept the spine board, one either side of the board at the shoulder position.

This document has moved

Please refer to the definitive site at http://www.dfm.org.uk/wdic/

Weil's Disease

Written by the NWCRO Medical Officer for informational purposes only. No liability accepted. This guide is based on current medical opinion and is not guaranteed accurate in all specific cases.

Weil's Disease is a bacterial infection, caused by the Leptospirosis bacterium, and is spread by the urine of rats. Cave water draining from farmland or areas of human habitation is usually infected with leptospirosis to varying degrees. Whether you will catch Weil's Disease depends on the levels of infection, what you do with the water, and how susceptible you are.

The bacteria usually enters your body via cuts to the skin, or via the nose, mouth or alimentary tract (for those with a limited medical vocabulary, the alimentary tract sees the food on the way out, the mouth sees it on the way in..) Thus, anyone coming into contact with infected water or swallowing any of it is at risk of infection.

Note that infected water does not have to look and smell like raw sewage to be dangerous. The cave does not have to be infested with rats if the run-off comes from an infested surface area. However, water which does appear polluted, or the sight of some of our furry friends, is Warning Number One that the water is to be avoided.

To minimise the risks of infection, the only truly effective way is to avoid contact with the water. Thus, avoid immersion, especially the head, and cover any cuts with waterproof dressings. Wear oversuits and gloves, and divers, who are particularly at risk, should opt for drysuits and try as much as possible to avoid swallowing any water when purging or changing regs.

An attack of Weil's resembles a cold or flu in the initial stages. The incubation period is from 3 to 19 days. Early symptoms are: Fever, muscular aches and pains, loss of appetite, and nausea when lying down. Later symptoms may include bruising of the skin, sore eyes, nose bleeds and jaundice. The fever lasts for approximately five days, then a significant deterioration follows.

If untreated, Weil's Disease is serious and often FATAL

If you become ill a few days after a caving trip, and you have any of the above symptoms, it is extremely important to contact your doctor as soon as possible. You must tell your doctor that you suspect Weil's Disease, as many of them do not associate it with influenza symptoms without a helpful hint.

Treatment with antibiotics is only effective if started rapidly after symptoms develop. A blood test is conducted to determine the presence of Weil's Disease, the public health laboratory receiving the test should perform an ELISA test for leptospirosis. If in the United Kingdom, and the local PHL cannot perform and ELISA test, the sample should be sent to: The Leptospirosis Reference Unit, Public Health Laboratory, County Hospital, Hereford HR1 2ER. Telephone 0432 277707. This contact is for UK use only, by the doctor or PHL staff, NOT cavers with questions! Weil's Disease is a notifiable illness in the UK and it is essential to disclose a confirmed case to the local Public Health office, who will need to know where you believe it was caught.

Back to Caves and Caving in the UK

What is Weil's Disease? (*Lepto Spirosis*)

Weil's disease is an infection carried in rats urine which contaminates water and banks of lakes, ponds and rivers. The disease which is notifiable is serious and requireS hospital treatment.

Symptoms start 3 to 19 days after exposure to contaminated water.

Early symptoms are similar to 'Flu'.

A few sensible precautions

DO cover with waterproof plasters or gloves all scratches, cuts, sores and breaks in the skin. Disinfect any wounds as soon as possible if they occur whilst at the waterside.

ALWAYS wash your hands or cover food with a wrapper before you eat.

NEVER put your hand to your mouth after immersion in river water and never place bait or fishing line in the mouth.

DON'T touch any dead animal especially rats.

NEVER leave food, groundbait or bait on the bankside.

ALWAYS take home your rubbish

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