

# GUIDELINES

## FOR PHYSIOTHERAPISTS WORKING IN AND/OR MANAGING HYDROTHERAPY POOLS

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# INTRODUCTION

This document is designed to provide basic information to physiotherapists and other aquatic professionals managing or working in hydrotherapy pools. The material contained herein is to serve as a guide to ensure that safety and professional standards are maintained and that water is used as an effective therapy and exercise medium. The aim of the Guidelines is to continually improve the quality of care offered to the public.

Recognition has been given to differing opinions on the therapeutic use of water. It is recognised that individual physiotherapists will work as sole practitioners in community pools and that physiotherapists will be involved in the management of hydrotherapy pools in the community, in private practice and in institutions. In many situations other professionals will work in the water or manage the facility used by the physiotherapist.

Hydrotherapy pool managers owe a duty of care to the service providers who use their facilities. They have a duty to consider Australian, State and Council regulations where advertising or carrying out business as a hydrotherapy facility/pool. They have a duty to provide a facility that meets basic criteria in safety and design, access to appropriate service providers and infection control and cleanliness.

These guidelines are designed to give both the physiotherapist and the manager some guidance as to what constitutes acceptable standards regarding credentialing pool workers, safety and infection control.

In developing these guidelines, all possible types of water exercise and therapeutic aquatic activity including Aquatic Physiotherapy (Hydrotherapy) were considered. It is also important to remember the utilisation of non-purpose built pools, the management of which is not always controlled by physiotherapists. The document therefore outlines minimum

standards that are both essential and achievable in all circumstances.

These guidelines do not include detail on pool design. They should however be read in conjunction with the existing Australian Standards AS3979.

Furthermore, it is recognised that there are additional standards at state and local government levels, which relate to infection control and pool sanitisation and these will need to be considered. Other professional associations may have standards for their own members that need to be considered.

All aquatic professionals, including physiotherapists, must recognise that a duty of care is owed to clients regarding both the selection of appropriate facilities and the form of service offered. The benefits, potential hazards and dangers must all be explained. In offering a service, the aquatic professional takes responsibility for the client's safety.

These standards have been designed utilising currently available knowledge in the areas of Aquatic Physiotherapy, water exercise and therapeutic swimming. They are recommended to all professionals working in hydrotherapy pools or working with people with special needs and/or disabilities in a water environment, to all physiotherapists including members of the Australian Physiotherapy Association (APA) and to members of the community who may be involved in managing hydrotherapy pools. They represent the minimum acceptable standard of professional practice and are regularly reviewed to continually improve the practice of all hydrotherapy activities including Aquatic Physiotherapy, water exercise and therapeutic swimming.

These guidelines will hopefully encourage other professional bodies to develop standards in the area that will ensure client safety and best practice.

## ACKNOWLEDGEMENTS

These guidelines for physiotherapists working in or managing hydrotherapy pools were revised from the original documents *Clinical Standards for Hydrotherapy 1990 and revision 1995*.

This revision was co-ordinated by Maxine Pryce (Victorian Aquatic Physiotherapy Special Group convenor) and Julie Harrison (National Aquatic Physiotherapy Group Convenor) with contributions from Judy Larsen (Queensland Aquatic Physiotherapy Special Group member), Di Burton (South Australian Aquatic Physiotherapy Group Convenor), Jenny Geytenbeek (South Australian Aquatic Physiotherapy Group committee), Harry Touma (NSW Aquatic Physiotherapy Special Group Committee), Ricki Deane (The Spastic Centre of New South Wales) and Diana Howell (ACT Aquatic Physiotherapy Interest Group). Also consulted were David Payne (Royal Children's Hospital Brisbane), Karen Groves (Queensland Group member, SPG member), Maree Raymer and Darryl Lee (Royal Brisbane Hospital), Gillian Whitehouse (Tasmanian APA PD Officer), Kirsty Ewens (ACT) and Leslie Chua (WA). There was also verbal communication with many other physiotherapists and members of other disciplines throughout Australia



# DEFINITIONS OF ACTIVITIES CARRIED OUT IN A HYDROTHERAPY POOL

## HYDROTHERAPY

Hydrotherapy is a word that has been used to describe a wide range of activities, of which most pertain to therapeutic and exercise activities carried out in heated pools. More recently, health funds and traditional medicine have recognised hydrotherapy as a physiotherapy treatment carried out in water where the properties of water are utilised to achieve specific therapeutic goals. There is much confusion at a public level, however, with many different professionals using the term hydrotherapy (some being volunteers with minimal or no training). The word is also used to represent a range of alternative therapies including colonic washouts. It is recommended that “hydrotherapy” be used as the generic label for the many activities that occur in a hydrotherapy pool and that providers of aquatic services further define their specific roles. The most common activities coming under this banner and usually co-ordinated by hydrotherapy pool managers include:

- Aquatic Physiotherapy Services
  - Individual
  - Group
  - Classes
  - Physiotherapy prescribed exercise programs
- Water Exercise Services
  - Individual
  - Classes
  - Aquatic personal training
- Aquatic Fitness Activities
  - Aquarobics
  - Deep water activities
- Swimming activities
  - Learn to Swim
  - Swimming for people with disabilities
  - Therapeutic swimming

## AQUATIC PHYSIOTHERAPY

To assist with defining the roles of aquatic professionals and to avoid confusion with compensable bodies, medical professionals and the general public, the Australian Physiotherapy Association has defined the specific practice of physiotherapy in water as “Aquatic Physiotherapy”. It is carried out by a physiotherapist.

Aquatic Physiotherapy treatment (individually or in groups) incorporates individual assessment, diagnosis and the use of clinical reasoning skills to formulate a treatment program appropriate to the client. Reassessment is undertaken at the appropriate time by the physiotherapist, with outcome measures recorded in keeping with evidence-based practice.

The aim of Aquatic Physiotherapy is to assist with the rehabilitation of neurological, musculoskeletal, cardiopulmonary and psychological function of the individual. In some cases it will also assist in maintaining the client’s level of function or prevent deterioration (eg balance and falls prevention) or prevent injury (eg aid in recovery in a preventative sports medicine program). Aquatic

Physiotherapy may involve individual treatment in a one to one situation or may be undertaken in groups or classes. It may be used alone or in conjunction with other rehabilitation practices.

**Individual Aquatic Physiotherapy:** This form of treatment may utilise manual skills (including mobilisation, soft tissue techniques and stretches) where an enhanced treatment outcome is sought by combining the physiotherapist’s skills with the properties of immersion in water. Individual Aquatic Physiotherapy may include the design of specific exercise programs incorporating shallow or deep water activities. Individual treatment may be selected as the mode of treatment delivery for accurate demonstration and correction of exercise, facilitation of desired movement patterns and motor relearning.

Aquatic Physiotherapy can also incorporate the development of independent movement in water and the prescription of modified swimming activities, taking into account pathological changes seen in neurological and orthopaedic/musculoskeletal conditions.

The level of disability or water competence of the client may necessitate individual treatment.

Where appropriate, water safety and independent movement in water may also be taught or assessed.

Fee structures for individual Aquatic Physiotherapy are similar to that for land physiotherapy.

If a physiotherapist does not offer Aquatic Physiotherapy, appropriate referral to a physiotherapist with skills in Aquatic Physiotherapy is recommended. In such cases a client may be “handed over” to the Aquatic Physiotherapist or the two physiotherapists may communicate to both provide appropriate management. Some compensable bodies prefer the client to be managed by a physiotherapist who offers the combined modalities.

**Aquatic Physiotherapy Group Programs:** These may be individually tailored yet supervised in clinical groups where individuals follow specific exercise programs designed according to their own pathology, rehabilitation or recovery requirements.

In some situations, the client may be supervised/assisted during the exercise component of their management by hydrotherapy/physiotherapy assistants. Minimum standards of training apply (see section 2.2)

**Aquatic Physiotherapy Classes:** Clients may participate as part of a class designed to meet specific needs such as those associated with pregnancy, general fitness, mobility for the older adult and people with arthritis. Other aquatic professionals (see definitions of water exercise) may offer similar classes.

It is recommended, however, that simple outcome measures be used to ensure that loss of function and deterioration in mobility is readily identified. When deteriorating outcomes are identified it is strongly recommended that the participant be referred for individual evaluation where the physiotherapist can perform a comprehensive assessment to identify future management requirements.

As with all aspects of physiotherapy, independent and/or home programs may be prescribed. The client's water safety and ability to carry out aquatic exercises independently must be ascertained (see section 1.1.9). The client should carry out these exercises (a physiotherapy prescribed exercise program) in a pool that is safe and accessible.

**Physiotherapy Prescribed Exercise Programs:** Following assessment, treatment and instruction in selected aquatic activities, the physiotherapist may advise clients on a program of appropriate exercise that the client can perform independently. Exercises should be reviewed at appropriate intervals while the client is being managed by the physiotherapist. This will depend on the client's condition and rate of progress, and the program should be modified and/or progressed as required with outcomes remeasured regularly.

In many cases, a client's Aquatic Physiotherapy management will be integrated with land physiotherapy management. It is the responsibility of all physiotherapists involved in the client's care to consider all appropriate modalities.

A physiotherapy prescribed exercise program may be selected as the appropriate mode of Aquatic Physiotherapy intervention for many reasons. It may be the best way of progressing rehabilitation and promoting independence, there may be limited access to an appropriate pool or pool sessions by both the client and the physiotherapist, or it may be more cost efficient for the client or compensable bodies.

In some situations, referral to other aquatic professionals will be appropriate, eg exercise physiologist, aquatic fitness instructor or swimming teacher/coach. Appropriate documentation detailing the reasons for clinical decisions is recommended.

## WATER EXERCISE SERVICES

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Water exercise is exercise conducted in water to maintain and upgrade body strength, flexibility, conditioning and general fitness and to promote a sense of wellbeing, and is usually performed or instructed by exercise professionals (see 2.2.1). Water exercise can enhance the progress of many rehabilitation and recovery programs and can be offered independently or to complement existing therapies.

**Individual Water Exercise:** Clients are assessed and instructed in a program to suit individual needs. It is recommended that the instructor teach individuals from within the pool

**Water Exercise Classes:** Water exercises may be offered in classes with each individual following a personally prescribed program that has been individually taught or with the class following a program of exercises designed with a general goal.

**Aquatic Personal Training:** Water exercise can enhance training and fitness regimens for many individuals.

## AQUATIC FITNESS ACTIVITIES

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Aquatic fitness activities can be conducted under many titles (eg aqua fitness, aquarobics, water workout, water callisthenics, deep water running) by a range of exercise professionals including exercise physiologists and aquatic fitness leaders who should have appropriate aquatic training (see section 2.2).

## SWIMMING ACTIVITIES

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There is a wide range of swimming activities that may be offered in a hydrotherapy pool, including:

**Learn to Swim:** Swimming lessons may be offered for all ages and abilities, eg infants, older adults and people with disabilities. Often the hydrotherapy pool is used with these populations because of pool design, temperature considerations and economic use of resources. Infection control and screening procedures must be implemented in this population, as with all hydrotherapy pool users, to minimise risk to others.

**Therapeutic Swimming:** This may be used by physiotherapists or other exercise professionals as part of rehabilitation programs for strength and conditioning, fitness, weight loss and pain management. Water safety/confidence is a component of any swimming program but will vary according to ability of client and may need to be taught.

**Swimming for People with Disabilities:** In many areas of disability, the teaching of formal strokes may not be appropriate but individuals can still be taught independent movement in water. Physiotherapists may be involved in swimming for people with disabilities and teaching independent movement in water to ensure a therapeutic benefit for the client. This can be done by the modification of strokes, positioning, tone reduction and facilitating appropriate patterns of movement to maximise function and movement in a population of people with disabilities. Physiotherapists may also prescribe appropriate equipment including flotation devices.

Communication between professionals is encouraged at all times, particularly when pathologies exist in clients undertaking swimming activities.

# STANDARD 1: SAFETY

*Hydrotherapy pool services (including Aquatic Physiotherapy, water exercise and swimming activities) shall be organised and administered in accordance with acceptable standards for clients, staff and the working environment to provide optimum quality of care.*

## 1.1 CLIENT AND STAFF SAFETY

During Aquatic Physiotherapy, water exercise programs and swimming activities the safety of clients and service providers must be ensured at all times.

### 1.1.1 Staff/Service Provider/Client Ratio

The ratio of client to service provider is dependent on many factors including:

- pool features
- disability of the client including physical, intellectual and psychological (eg suicidal and depressive) problems
- ability of the client/s in water
- type of therapeutic technique to be used

It is necessary that these factors be taken into consideration when determining staff/service provider/client ratios.

For each professional working in the pool, the manager should refer to the specific standards or guidelines of that profession or other governing bodies for safe working practices. Where none exist, draw safe guidelines from similar professionals working in the same situation.

A range of industry standards for training requirements of aquatic professionals is included in Standard 2 in this document.

All clients attending a pool for independent prescribed exercise should have been screened for water safety. All should be capable of exiting the pool independently or with their carer. Staff/client ratios here should be comparable with public swimming pool ratios, with people with increasing physical and intellectual disability requiring increased staff/client ratio.

### Aquatic Physiotherapists

Physiotherapists with training in Aquatic Physiotherapy practice work in a wide range of situations including:

- A physiotherapist responsible for a group or class with pool supervisor/assistant.
- A physiotherapist responsible for a group or class without pool supervisor.
- A physiotherapist treating individual clients (1-3 in pool at once).

An in-pool assistant or external pool assistant/observer is required in any circumstance where safety would be compromised if something were to happen to the physiotherapist. This includes situations where the client is not independent and safe in the water. It may include a situation where some of the other class members may also need assistance in exiting the pool if something were to happen to one member of a class.

In addition it is recommended that physiotherapists do not practise alone in a pool environment. When treating individuals, an external observer could be any responsible

adult including the client's spouse or carer.

Where no in-pool alarm exists, an external observer/assistant is necessary to ring the alarm.

### 1.1.2 Emergency Policy & Procedures

Pool managers have a responsibility to ensure that rescue protocols and procedures are clearly documented for the facility. Aquatic professionals working in these facilities must be able to access these policies and may need to work with managers to adapt policies to suit different user groups.

A list of rescue competencies should be used to assess all staff on a yearly basis. Competencies would be facility specific. An example of possible competencies are:

- Able to get to the deepest section of the pool and perform appropriate rescue.
- Able to tow object to a safe position at railing/edge.
- Able to hold position for specified time (deep pool).
- Able to commence airways resuscitation.
- Able to assist in removing a person from pool using appropriate equipment and transfer.

All staff, volunteers, carers and visiting users involved in conducting aquatic activities at the pool will be familiar with and competent in their execution. These policies must be reviewed annually. Where appropriate a pool manager can offer yearly inservice training in institution specific emergency procedures for all its service providers.

### 1.1.3 Emergency Equipment

Resuscitation equipment appropriate to the client base should be available eg face shield, Air-Viva, Oxy-Viva. This should be in good working order and appropriate staff trained to use it. When the pool is in use at least one person present should be qualified to use resuscitation equipment

There should be an adequate system for summoning assistance in an emergency eg alarm, mobile or cordless telephone, personal alarm or whistle. It is highly recommended that some form of device be reachable by workers in the pool so that a physiotherapist or pool worker can summon help without exiting the pool. All staff must be familiar with the system.

Where a pool alarm system is in place, this must signal in the pool area and the nearest place for assistance when activated. Pool alarms must be tested on a regular basis to ensure effective working order. Where no in-built alarm exists a personal alert alarm or whistle may be used to summon assistance.

Equipment to assist in removing clients from the pool will be necessary. In cases of respiratory or cardiac emergency hoists are usually not recommended as a means of emergency exit due to their slowness. Dedicated rescue slings or spinal boards are recommended.

Protocols for resuscitation in a wet environment must be considered (eg adequate towels to dry clients in case of

defibrillation). A practice drill of the emergency procedures in a wet environment should be carried out with appropriately qualified staff (eg ambulance staff or emergency department).

#### 1.1.4 Staff Knowledge Of Safety & Emergency Techniques

All aquatic professionals must have a sound knowledge of, and be competent in, the use of emergency procedures including rescue techniques for special populations, and cardiopulmonary resuscitation skills.

All water based workers including volunteers must be able to provide evidence of having attended a practical update in cardiopulmonary resuscitation skills. This must be conducted by a person with recognised qualifications in this area and CPR skills must be updated annually.

Training in available resuscitation equipment may be appropriate in some situations. Additional practice of institution or client appropriate pool rescue protocol is encouraged, with frequency being dependent on client type.

It is recommended that all pool workers, observers and volunteers are water safe and able to demonstrate the ability to rescue someone from the deepest end of the pool in which they work.

#### 1.1.5 Rules & Regulations

Aquatic professionals using a hydrotherapy pool have a responsibility to ensure that pool rules are observed by themselves, their staff and their clients. If the client is unable to understand or clearly communicate their understanding of pool rules/safety instructions then the aquatic professional must assess the client's ability to be safely managed in the pool and environment. This assessment must be documented and will directly affect the staff client ratio.

In some community pools, the aquatic professional may need to work with the pool management to establish these rules.

#### 1.1.6 Screening

Aquatic professionals must screen clients prior to commencement of any activity in the water (see Appendix 1 and 2). This allows appropriate decisions to be made regarding:

- Infection control,
- Suitability for participation,
- Safety and assistance requirements, and
- Period of immersion.

All service providers using a pool must be aware of the rules pertaining to use of that pool and the possibility of putting other clients at risk.

#### 1.1.7 Hygiene & Infection Control Procedures

Appropriate infection control/hygiene procedures shall be implemented for all persons entering the pool and/or pool environment. (see Appendix III *APA Policy 66 on Infection Control. Including blood-borne and sexually transmitted viral infections, May 2001*).

Infection control/hygiene procedures will vary, depending on the client type. They may include the following:

- Client precautions and pre screening (see Appendix I & II)
- Cleaning and disinfection of pool, pool environs and equipment (hosing of floors alone is not sufficient)

- Pool chemistry and pool testing (see Appendix IV)
- Use of appropriate clothing
- Showering before and after pool session
- Toileting
- Environmental management (wet and dry zones, shoe and wheelchair free zones)
- Risk management protocols

To maintain the appropriate levels of environmental cleanliness, the frequency of pool testing and pool and environmental cleaning should be increased with greater client numbers, or with any increase in the number of clients who have specific conditions such as incontinence.

#### 1.1.8 Client Records

With the increasing ability of older people, people with pathologies and people with disabilities to access hydrotherapy pools, documentation of client information becomes even more important. There may be factors such as pool temperature that can have adverse affects on some clients. Important information includes:

- Name
- Address
- Telephone number
- Date of birth
- Contact person in case of emergency
- Medical practitioner
- Relevant screening criteria eg diabetes

This information should be provided by all users including carers and aquatic professionals and it should be readily available while the client is in attendance.

If the client is to attend a pool independently and the referring physiotherapist feels that the client is unsafe, then special arrangements should be made for their supervision and the above information provided.

#### 1.1.9 Clients Performing Independent Exercise Programs

Before referring a client for an independent water exercise program a physiotherapist should ensure that the client is water confident and able to perform the exercises prescribed safely. This can only be done by observing the client in the pool and assessing a number of water confidence criteria.

Swimming is not the only method of ensuring water safety but it is the most common means of assessing water confidence. If a client is unable to swim, then they would need to demonstrate the following skills to be allowed to enter the pool to do a prescribed exercise program independently:

1. Enters the water independently.
2. Can roll from prone to supine and regain a safe breathing position.
3. If unable to walk or touch the bottom, can propel themselves to the edge of the pool and a position of safety while maintaining a safe breathing position.
4. Exits the pool or able to get into hoist independently.

If unable to demonstrate these criteria then the client would need to attend individual or group sessions or attend with an appropriately trained carer.

Some in-pool exercises and hydrotherapy pool equipment can

put clients at increased risk. The effects of buoyancy, density and resistance will affect exercises performed in the water. It is expected that in all situations, exercises will have been demonstrated by the physiotherapist in the pool with the client.

#### 1.1.10 Personal Management

Physiotherapists should take responsibility for their own personal management incorporating self-screening. This will include the physiological effects of immersion eg effect of warm environment, problems of dehydration and skin care. Physiotherapists may also be responsible for those working for them (eg hydrotherapy assistants).

#### 1.1.11 Use Of Hydrotherapy Pool By “General Population”.

There are many scenarios where an institution may decide to use their hydrotherapy pool for other purposes (eg recreation or swimming for staff members) but it is beyond the scope of these guidelines to go into detail about each one. If an institution allows their hydrotherapy pool to be used for other purposes by the general population, there are many legal and safety issues that would have to be considered in each situation.

- The institution must very clearly delineate the times for different purposes.
- Legal and insurance implications should be investigated.
- The local Council and State regulations for public pools must be followed.
- Infection control measures must remain stringent to allow the pool standards to be maintained at the appropriate levels for clients.
- If the institution allows their other facilities (eg rehabilitation gym) to be used by staff members with or without supervision, then they probably will have guidelines in place.

## 1.2 SAFETY OF FACILITIES

It is understood that there is a large variation in design and standards in existing hydrotherapy pools and that in some cases, ordinary pools are used for clinical practices. Best practice in terms of facility standards is something that can always be a goal but may not be reasonably achievable with facilities available. Documentation of processes to ensure client safety and facility standards are encouraged where these standards cannot reasonably be met.

Where possible, facilities used for hydrotherapy shall be in accordance with accepted existing pool design standards. All pools used for hydrotherapy should be satisfactorily maintained.

#### 1.2.1 Pool & Environment Maintenance

Relevant State Health Department Regulations shall be adhered to at all times (Appendix IV).

These include:

- Water Purification Standards for Public Swimming Pools
- Storage and Handling of Chemicals

It is the physiotherapists' responsibility to familiarise themselves with the standards relevant to their State.

Physiotherapists/organisations with purpose built hydrotherapy pools shall also consider AS3979-1993 and assess local Council/State requirements.

Physiotherapists utilising public pools for Aquatic Physiotherapy are not ultimately responsible for pool chemistry. However, they owe a duty of care to their clients when recommending or using a particular facility for ongoing treatment or management, and therefore must ensure that the pool they are utilising maintains a standard within their State Health Department guidelines.

Any adverse effects of immersion should be documented and pool managers notified. Most pool managers are obliged to have a logbook that is accessible to pool hirers. This logbook documents chemistry and microbiology readings.

#### 1.2.2 Access To Hydrotherapy Area & Pool

Adequate assessment of the client's abilities and the facilities of the pool will ensure that the pool and facilities meet client needs and that the necessary assistance is available if required.

#### 1.2.3 Facilities

Change, shower and toilet facilities shall be appropriate for the client base. The facilities must conform to AS1428.1-1993 where access is required for wheelchair users and other people with disabilities.

Adequate lighting levels must be maintained at all times, to allow client safety and adequate supervision. The aquatic professional should be able to see all participants at all times.

#### 1.2.4 Design Standards

The physiotherapist in charge of pool programs shall ensure that the design of the pool and the equipment being utilised is safe for use by the target population and for the proposed activities to be undertaken. Equipment should be checked regularly.

Consideration should be given to the following:

- Non-slip surfaces of pool and surrounds.
- Temperature of pool and surrounds appropriate for population and activity. The temperature of hydrotherapy pools may vary according to use and funding. Ideal temperatures will vary. For example clients with acute pain, arthritic or some neurological conditions will benefit from a pool at 34-35°C while clients involved in work-hardening and aerobic programs may prefer a slightly cooler pool. Physiology literature suggests that a thermoneutral pool (in which the body neither gains nor loses temperature) may be the most appropriate for Aquatic Physiotherapy techniques. Thermoneutral is usually recognised as a “window” of temperature (based on skin temperature) from 33.5-34.5°C. This temperature range can be recommended as therapeutically useful for a wide range of conditions treated by physiotherapists in the pool.
- Humidity control.
- Access to pool and environs.
- Change facilities.
- Size and shape of pool.
- Depth.
- Water purification methods.
- In-pool equipment (eg jets, walking rails, ramps).

- Lighting.
- Flotation and exercise equipment.
- Emergency equipment.

New purpose built hydrotherapy facilities should take into consideration AS3979-1993 and AS1428.1-1993. Local councils will have their own building requirements and in some places these standards must be followed.

Documentation of variations from the standards is recommended.

Physiotherapists involved in pool design should ensure these standards are brought to the attention of appropriate personnel. Individual pool design will depend on a variety of factors including target population and budget.

## STANDARD 2: ACCEPTABLE TRAINING LEVELS OF PEOPLE WHO WORK IN HYDROTHERAPY POOLS

*All pool workers shall have adequate education and training to ensure implementation of high standards and safety of the client at all times.*

*The following list of pool workers and suggested minimum standards/training is designed to assist physiotherapists and other professionals who are pool managers to develop acceptable accreditation and credentialling procedures.*

### 2.1 PHYSIOTHERAPISTS: AQUATIC PHYSIOTHERAPY/HYDROTHERAPY

The following is the minimum training that is currently acceptable for physiotherapists working in the area of Aquatic Physiotherapy. This is under review and an imminent increase in hours of training is expected to reflect the changing practices and developments in the area in the past few years.

#### 2.1.1 Training (Undergraduate)

The Australian Physiotherapy Association recognises the wide disparity between the States in undergraduate training and recommends formal training of a minimum content of 4 hours theory and 8 hours practical training in addition to placement with physiotherapists who meet these standards, with formal training and experience in Aquatic Physiotherapy.

Whilst variations in State training continue, a certificate of attainment documenting course attendance and content issued by the educational organisation is recommended to assist credentialling procedures that should occur in hospitals and institutions as part of their accreditation processes. Some universities have formalised Aquatic Physiotherapy units and where these exist, the university is encouraged to supply the students who attend with a certificate outlining the content of the unit.

Clinical placements and non structured elective training units do not fulfil the requirements of formal training in precautions, contraindications, physiology, physics, water safety, pool rescues and specific techniques. Undergraduate students are, however, encouraged to maintain a log of practical hours spent in clinical placements in hydrotherapy.

#### 2.1.2 Training (Postgraduate Qualification)

Physiotherapists whose undergraduate training has not included the minimum requirement stated above should undergo formal postgraduate qualification training and continuing education or practical work with physiotherapists who have training and experience in Aquatic Physiotherapy, prior to using Aquatic Physiotherapy as a treatment modality. The Australian Physiotherapy Association recommends formal training of a minimum of 4 hours theory and 8 hours practical with certificate of attendance/achievement (see section 2.1.1) to assist credentialling procedures that will occur in many hospitals and institutions.

Where a service cannot continue because training is not immediately available, a comprehensive mentoring system based on the knowledge and skills listed in 2.1.3 could be instituted and documented until formal training is available. A mentoring system does not negate the need for formal training as listed.

#### 2.1.3 Knowledge & Skills

The training outlined above is the minimum required to achieve basic Aquatic Physiotherapy knowledge and skills in the following:

- Principles of hydrostatics and hydrodynamics and their application to exercise in water.
- Physiological effects of immersion.
- Therapeutic effects of activity in a hydrotherapy pool.
- Specific Aquatic Physiotherapy techniques applicable for different client groups including those with conditions affecting the musculoskeletal, neurological, respiratory and cardiovascular systems. Techniques for the treatment of all age groups should be covered.
- Aquatic manual therapy techniques, aquatic core stability activities and outcome measures (both land and water) used by physiotherapists.
- Safety, rescue and emergency techniques.
- Effective utilisation of equipment.
- Development of movement and independence in water.
- The use of appropriate fitness and swimming techniques during the treatment of various conditions.
- Group dynamics.

Physiotherapists who manage hydrotherapy pools must also have knowledge of:

- Safety in the pool environment
- Water balance and sanitisation
- Pool cleaning and maintenance
- Pool plant operations
- Standards of training for other aquatic professionals
- Safe storage and handling of chemicals
- Occupational health and safety requirements

They must also have the ability to teach and supervise ancillary staff, volunteers and others in any of the following areas appropriate to their position:

- Relevant properties of water, eg buoyancy, turbulence, refraction
- Basic pool maintenance
- Basic pool water treatment and testing
- Safe handling and storage of chemicals (as specified by the occupational health and safety requirements in particular States and institutions)
- Safe client lifting and handling techniques for the pool environment

#### 2.1.3 Continuing Professional Development

All physiotherapists working in any area of hydrotherapy shall take responsibility for their own postgraduate education

and training consistent with the APA policy on mandatory continuing professional development and be aware of new developments in the area.

## 2.2 STANDARDS OF TRAINING FOR OTHER HYDROTHERAPY POOL WORKERS

Physiotherapists (and other professionals) who manage hydrotherapy pools have a responsibility to ensure that all pool workers have appropriate qualifications and credentials. This will minimise risks and legal implications. Physiotherapists should also be aware of the skills and training of other aquatic professionals when developing referral networks to ensure best practice and the highest quality of treatment for their clients.

### 2.2.1 Aquatic Exercise Professionals

**Exercise physiologists/human movement graduates:** The undergraduate training in many of the university based exercise sciences, human movement studies, and exercise physiology courses do not contain the basic level of theory or practical in aquatic exercise that would meet basic industry standards in aquatic education. Currently, the Australian Association of Exercise Science in Sport (AESS) does not have a separate category for postgraduate recognition of aquatic training.

The APA has recognised this problem with its own new graduates and has defined the minimum amount of formalised training required to work in the area. The APA encourages other professional bodies representing those who work in the water to develop similar standards to protect the whole industry. Where no professional standards exist, then the equivalent of what is expected of physiotherapists may be a guideline. General work experience is not adequate where clients have specific pathologies or disabilities. Formal training in the physiology and physics of immersion and rehabilitation specific areas would be recommended if working with special populations (eg cardiac, musculoskeletal, disabilities).

These professionals should also have professional indemnity insurance, CPR qualification (yearly renewable), pool rescue training and continuing professional development in the aquatic area. Where a client is given exercise to be performed independently, prescribers of the exercises should be proficient in assessing water confidence/safety (see 1.1.9).

**Aquatic fitness instructors/aquarobics instructors:** Aquatic fitness instructors have professional registration in most States, which accredits them to work with either classes or individuals. This usually involves a basic exercise credential with an aquatic module, as well as some formal training in the area of water exercise. These professionals should also have insurance, registration with a recognised body, CPR qualification (yearly renewable) and pool rescue training.

Registration usually requires continuing professional education. Where a client is given exercise to be performed independently, prescribers of the exercises should be proficient in assessing water confidence/safety (see 1.1.9).

**Personal trainers (aquatic):** A personal trainer who wished to bring clients to a hydrotherapy pool would require aquatic training as appropriate to their original qualification, eg

exercise physiologist or fitness instructor (see appropriate section). If working with people with disabilities some training in this area would be required. Insurance, CPR qualification (yearly renewable) and institution specific pool rescue training are also required.

Where exercise is prescribed to be performed independently, prescribers of the exercises should be proficient in assessing water confidence/safety (see 1.1.19).

### 2.2.2 Hydrotherapy Assistants

Hydrotherapy assistants will often be responsible for supervising a pool during independent exercise sessions and therefore may be responsible for recognising risk situations and infection control problems. Knowledge in these areas and in the screening data (Appendix I) is essential. In some States, training is available for physiotherapy assistants and this training or similar (eg Austswim disabled extension course or equivalent) is recommended if they have no previous medical or aquatic background. Inservice training for institution specific needs is recommended (eg lifting, manual handling, risk management and screening). The Australian Physiotherapy Association has guidelines for the roles and responsibilities of physiotherapy assistants. CPR qualification (yearly renewable) and institution specific pool rescue courses are essential. Separate professional indemnity insurance is usually not necessary if they are employed by the institution.

### 2.2.3 Teachers Of Swimming

Swimming teachers have Austswim as their professional body. They require a current Austswim (or equivalent) qualification, insurance, CPR qualification (yearly renewable) and pool rescue training.

**Teachers of swimming to special populations/swimming for people with disabilities:** These teachers require a current Austswim (or equivalent) qualification plus an Austswim teacher of swimming to people with disabilities qualification (or equivalent), insurance, CPR qualification (yearly renewable) and pool rescue training.

### 2.2.4 Occupational Therapists, Speech Pathologists & Nurses

These professions have no formalised aquatic training and in most cases no formal exercise training. They will often assist the physiotherapist in the pool in special schools, nursing homes etc and therefore would require insurance (if not employed), registration with recognised body if available, CPR qualification (yearly renewable) and practical pool rescue training. If taking clients into a pool individually, they would require formalised aquatic training unless they have been taught an appropriate program for each client by a suitably trained aquatic professional. For example, if running a water exercise class they would require minimum industry standards in exercise and aquatic activity as described in Standard 2.2.1.

### 2.2.5 Special School Teachers

Often these professionals will work under the guidance of a physiotherapist with Aquatic Physiotherapy training if therapeutic activities are performed, or a physical education teacher/exercise professional with appropriate aquatic training if recreational activities are performed. If working independently, these workers require training and or experience in aquatic practices eg Austswim disabled or equivalent or fitness instructors (aquatic) training.

Assessment and review by physiotherapists with aquatic training is recommended to maximise the benefit of therapeutic activity. Specific training in the handling of children with disabilities in the water is recommended. Insurance if not employed, CPR qualification (yearly renewable) and pool rescue training are necessary. Parents and other volunteers can be taught as carers for specific individuals (see 2.2.8 and 2.2.9).

#### 2.2.6 Recreational/Diversional Therapists

If working independently in the water, these workers require training and or experience in aquatic practices, eg Austswim disabled or equivalent or fitness instructors (aquatic) training. Specific training in the handling of people with disabilities in the water is recommended. In some situations, these workers may act as carers having been taught a program for individual clients (see 2.2.8). Insurance, CPR qualification (yearly renewable) and appropriate pool rescue training are essential.

#### 2.2.7 Massage Therapists

If working independently in the water, these workers require training and/or experience in aquatic practices eg Austswim disabled or equivalent or fitness instructors (aquatic) training as well as meeting criteria required for massage therapy. Specific training in the handling of people with disabilities in the water is recommended if they work in this area. Insurance, CPR qualification (yearly renewable) and pool rescue training are essential.

#### 2.2.8 Individual Carers

It is recommended that when a client requires a carer in order to use a hydrotherapy pool, each carer should be trained in handling each client and have current CPR qualifications. It is not adequate for one carer to teach another carer when they are looking after a totally dependent client, so each new carer should be taught about their specific client by an appropriately qualified aquatic professional. With many disabilities, training in client handling and carrying out a prescribed exercise program is ideally provided by a physiotherapist who can assess the individual, design a

program for their therapeutic and safety needs and teach the program to the carer. The program should be reviewed at intervals and upgraded appropriately by the physiotherapist. Where inappropriate handling is observed in the pool environment, it would be appropriate to inform the person responsible of the need for further training.

Carers or their organisations would need appropriate insurance.

#### 2.2.9 Volunteers

It is recognised that in some States, volunteer systems of water exercise classes have been established (particularly in the areas of arthritis, lymphoedema and asthma). The APA does not recommend this, as most volunteers do not meet the minimal training standards expected of other pool professionals. It is recommended that volunteer training progress towards participants having a basic (water) exercise qualification. These people should also have CPR qualifications (yearly renewable) and attend pool rescue training. Parents and others may work as volunteer carers in special school programs. Refer to 2.2.7. for minimal recommendations for parent in this situation.

Volunteers may also be involved as pool supervisors and external observers. In this situation institution specific pool rescue training and a current CPR qualification (yearly renewable) are essential. As volunteers are not exempt from litigation, insurance would need to be reviewed

**Accreditation or credentialling process:** Most hospitals and institutions have credentialling processes for accreditation purposes. It is recommended that aquatic professionals are included in these credentialling processes. Protocols are encouraged that monitor pool workers, ensuring basic training and ongoing professional development as well as yearly renewal of CPR qualifications and insurance and annual attendance at appropriate pool rescue inservices. Professional bodies are encouraged to protect their members and clients by working towards creating acceptable levels of professional conduct and training.

# STANDARD 3: RESPONSIBILITIES OF THE PHYSIOTHERAPIST

*Physiotherapists conducting Aquatic Physiotherapy/water exercise/therapeutic swimming shall comply with all Australian Physiotherapy Association (APA) Ethical Principles, Policies and Standards, and the relevant regulations and requirements of statutory authorities.*

## 3.1 PROFESSIONAL CONDUCT

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All physiotherapists shall abide by the APA Code of Conduct and be aware of the legal and ethical responsibilities relating to working in a hydrotherapy pool.

## 3.2 CLINICAL MANAGEMENT

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### Assessment and reassessment for Aquatic Physiotherapy

In addition to basic screening, all potential clients must have a land based physiotherapy assessment prior to entering the water. Some referring agencies/persons may not be familiar with the benefits of, and precautions for, activities in a hydrotherapy pool. It is therefore the physiotherapist's responsibility to ascertain client suitability. For some clients, it will be necessary to assess water safety and the ability to regain a safe breathing position. This can only be carried out in the water (see 1.1.9). It is not sufficient that a client tell the physiotherapist that they are water safe, and practical observation of this minimises possible risks. Both land and water assessments are necessary to ensure appropriate decisions are made regarding:

- Diagnosis
- Treatment
- Outcome measures
- Reassessment/program review
- Exercise prescription/swimming
- Suitability for independent water exercise

Some reassessment will occur every session but the type and frequency of measures will be dependent on the client's condition and progress and will include both land and water assessment techniques. All assessment, reassessment and screening data must be recorded.

### Aquatic Physiotherapy records

Documentation should include

- Contact details
- Next of kin
- Source of referral
- Screening data (see Appendix 1) and initial assessment
- Specific intervention, treatment and outcomes
- Swimmer, non-swimmer, water confidence
- Special precautions eg flaccidity, painful joints, weight-bearing status
- Assistance required on land including transfers, dressing and general mobility
- Selected mode of entry/exit to and from pool

Client confidentiality is essential, including specifics of medical condition and intervention. Completion of a client record for pool management (see 1.1.8) contains information relevant to safety of the client only.

## 3.1 QUALITY MANAGEMENT ACTIVITIES

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Quality management activities should be implemented in accordance with accepted clinical practice.

# APPENDIX I: SCREENING PRIOR TO ENTERING TO HYDROTHERAPY POOL

With the continuing advancement of knowledge in hydrotherapy, infection control and specific benefits of Aquatic Physiotherapy and water exercise, some persons previously considered contraindicated to pool therapy can now be treated safely. The following areas should be reviewed if appropriate to the client group:

## CARDIOVASCULAR SYSTEM

- Cardiac conditions
- Blood pressure
- Peripheral vascular disease

## RESPIRATORY SYSTEM

- Chronic and acute diseases
- Shortness of breath at rest or on exertion
- Vital capacity
- Tracheostomy

## CENTRAL NERVOUS SYSTEM

- Epilepsy/fitting
- Swallowing defects, abnormal movements
- Fluctuating tone
- High dependency clients

## GASTRO-INTESTINAL TRACT

- Faecal incontinence
- Diarrhoea, gastroenteritis
- Cryptosporidium
- Colostomies

## GENITO-URINARY TRACT

- Urinary incontinence
- Infection
- Discharges
- Menstruation
- Pregnancy

## INFECTIOUS CONDITIONS

- Airborne infections
- Herpes simplex
- AIDS, Hepatitis
- Methycillin Resistant Staphylococcus Aureus
- Vancomycin Resistant Enterococcus

## SKIN

- Surgical wounds, open wounds
- Tracking bone sinus
- External fixateurs
- Altered sensation
- Rashes
- Chemical sensitivity

## FEET

- Tinea
- Plantar warts

## EYES & EARS

- Visual impairment
- Contact lenses
- Hearing impairment
- Infections
- Tubal implants

## OTHER CONDITIONS

- Acute inflammatory conditions
- Heat sensitive conditions (multiple sclerosis, lymphoedema)
- Radiotherapy
- Morbid obesity
- Fear of water
- Clients who are intoxicated
- Clients who have psychiatric problems
- Behavioural/cognitive problems

## OTHER INFORMATION NOT COVERED ELSEWHERE IN ASSESSMENT

- Swimmer, non-swimmer, water confidence
- Special precautions, eg painful joints, weight bearing status
- General mobility on land, assistance required for dressing or transfers
- Mode of entry to pool

However, each potential client must be individually assessed. Then, taking the person's condition and the physiological effects of immersion into consideration, an informed decision can be made as to whether hydrotherapy treatment/activity is contraindicated or whether adequate precautions can be taken to allow the client to be safely and effectively managed in the aquatic environment.

Where a high risk for the client and/or other pool users exists, consultation with other informed professionals may be required. In particular, regarding infection control, staff and medical practitioners/specialists may be consulted. Consultation with peers working with similar clients can also be of value where uncertainty exists. If unsure, never put yourself or the client at risk

# APPENDIX II: MANAGEMENT OF PRECAUTIONS FOR ACTIVITY/TREATMENT IN A HYDROTHERAPY POOL

Examples of some precautions that may be necessary appear in the table below. Please note that this list is not exhaustive. Physiotherapists are encouraged to develop a screening tool for their own situation. It will not be appropriate to ask about every possible precaution with every client. The left side of the table below can be used to identify areas that need to be screened in your population. The right side of the table will give more detail once you have chosen the major conditions to be considered.

CONDITIONS	PRECAUTIONS
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## CARDIOVASCULAR SYSTEM

<b>History of hypertension, hypotension, cardiac disease, headaches, fainting, dizziness</b>	<ul style="list-style-type: none"> <li>• Liaise closely with treating doctor</li> <li>• Carefully observe client</li> <li>• Question closely on subjective feeling</li> <li>• Ensure adequate rest periods</li> <li>• Use positioning to minimise effects, eg if hypertension and client supine, elevate head or move to a vertical position. If hypotensive on standing, supine or reclined may be appropriate</li> <li>• Have appropriate medication poolside</li> <li>• Careful observation on exiting the pool and during post immersion showering as increased risk of hypotensive episode</li> </ul>
<b>Peripheral vascular disease</b>	<ul style="list-style-type: none"> <li>• Consider hydrostatic pressure on compromised peripheral vessels</li> <li>• Be aware of possible blood pressure changes</li> </ul>

## RESPIRATORY SYSTEM

<b>Respiratory disease</b>	<ul style="list-style-type: none"> <li>• Consider position and depth carefully</li> <li>• Have appropriate medication poolside</li> <li>• Warn that initially, shortness of breath may increase</li> <li>• Consider vital capacity in spinal clients</li> <li>• In respiratory where FEV<sub>1</sub> and/or vital capacity are &lt; 35% of that expected, immersion should be considered a risk.</li> <li>• Well supervised exercise of short duration and appropriate rests would be recommended</li> </ul>
<b>High dependency client including ventilated, O<sub>2</sub> therapy</b>	<ul style="list-style-type: none"> <li>• Increased assistance in pool as required</li> <li>• Adequate medical backup as required</li> </ul>
<b>Tracheostomy</b>	<ul style="list-style-type: none"> <li>• Appropriate flotation equipment available to keep tracheostomy site out of the water</li> </ul>

CONDITIONS	PRECAUTIONS
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- May require extra assistance for entries, exits and treatment

## CENTRAL NERVOUS SYSTEM

<b>Epilepsy/fitting</b>	<ul style="list-style-type: none"> <li>• Clarify type of fits</li> <li>• Inform all staff, in and out of pool</li> <li>• Agree to emergency procedures</li> <li>• Liaise with treating doctor if necessary</li> <li>• Treat as a high dependency client, ie increased supervision/one-on-one if necessary</li> <li>• Never leave unsupervised unless written confirmation by a doctor of control of the epilepsy and safe water history</li> </ul>
<b>Swallowing defects and marked abnormal movement (eg athetoid)</b>	<ul style="list-style-type: none"> <li>• Consider size of client for handling</li> <li>• Provide one-on-one treatment</li> </ul>
<b>Fluctuating tone</b>	<ul style="list-style-type: none"> <li>• Increased supervision as level of competence may vary with external influences</li> </ul>
<b>High-dependency client</b>	<ul style="list-style-type: none"> <li>• Assess resource usage in light of therapeutic benefits</li> </ul>

## GASTRO-INTESTINAL TRACT

<b>Bowel control</b>	<ul style="list-style-type: none"> <li>• Be aware of bowel regimen, eg the client who has faecal incontinence and is toilet timed</li> <li>• Evacuate bowel prior to treatment session</li> <li>• Use appropriate clothing including commercial incontinence pants or firm, close fitting Lyra leggings</li> <li>• Many clothes may prove helpful in the pool but on exiting the surrounds become an infection control risk. Be aware that the environment and wheelchair or hoist should be considered in risk management strategies</li> <li>• Anal plugs can be used</li> <li>• Anal taping may be successful in paediatrics</li> <li>• Unreliable faecal incontinence is a contraindication</li> <li>• Be aware of discrimination, as toddlers are often allowed in a pool yet are not toilet trained, while users with disabilities may be excluded for the same reason</li> <li>• Loose runny stools may provide a greater risk than solid stools that</li> </ul>
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CONDITIONS	PRECAUTIONS
	are easily removed and quickly managed
<b>Diarrhoea and gastroenteritis</b>	<ul style="list-style-type: none"> <li>• Many states have guidelines regarding this in their water purification guidelines for pools</li> <li>• Clients with diarrhoea and gastroenteritis should not enter the swimming pool for 7-10 days after the symptoms have settled</li> </ul>
<b>Cryptosporidium</b>	<ul style="list-style-type: none"> <li>• Follow screening precautions rigorously</li> <li>• See diarrhoea and gastroenteritis</li> <li>• All toddlers using a pool must wear firm fitting pants</li> </ul>
<b>Colostomies</b>	<ul style="list-style-type: none"> <li>• Check integrity of stomal site</li> <li>• Change bag before entry to pool</li> <li>• Care not to bump stoma site and dislodge bag</li> <li>• Use tight clothing or tubigrip to limit movement of bag</li> </ul>

**INFECTIOUS CONDITIONS**

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<b>Infectious diseases</b>	<ul style="list-style-type: none"> <li>• Consider management on land and other screening information</li> </ul>
<b>Airborne infections</b>	<ul style="list-style-type: none"> <li>• Liaise with infection control person</li> <li>• If active TB, flu or viral infection with likelihood of airborne particles, do not allow treatment in this environment</li> </ul>
<b>Herpes simplex (cold sores)</b>	<ul style="list-style-type: none"> <li>• Exclude from pool while present</li> </ul>
<b>AIDS, Hepatitis B</b>	<ul style="list-style-type: none"> <li>• Check carefully for open wounds and manage as above</li> <li>• Ensure all precautions checked regularly to identify changes in conditions</li> <li>• Refer to Australian National Council on AIDS Bulletin Feb 1990 "Hydrotherapy pools and their use by HV/AIDS clients"</li> </ul>
<b>Clients with Methycillin Resistant Staphylococcus Aureus (MRSA)</b>	<ul style="list-style-type: none"> <li>• Liaise with your Infection Control Officer</li> <li>• If positive swab but no open wound, allow entry (a percentage of the community test positive anyway)</li> <li>• If open or infected wound, assess ability to cover with waterproof sleeve. Dressing may not be appropriate</li> </ul>
<b>Clients with Vancomycin Resistant Enterococcus (VRE)</b>	<ul style="list-style-type: none"> <li>• Liaise with your Infection Control Officer and others with experience in the area.</li> <li>• Where VRE is present in a wound, the urinary tract or stools, entry to the pool may be contraindicated</li> <li>• Some strains of VRE respond to chlorine however some pools will</li> </ul>

CONDITIONS	PRECAUTIONS
	<ul style="list-style-type: none"> <li>• exclude clients with VRE from a risk management perspective</li> <li>• Further information is required</li> </ul>

**GENITO-URINARY TRACT**

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<b>Urinary incontinence</b>	<ul style="list-style-type: none"> <li>• Empty bladder prior to pool session</li> <li>• If catheter spigot/clamp catheter if appropriate or use strap or tubigrip to hold catheter bag firmly attached to leg. Empty bag prior to entry</li> <li>• Check for autonomic dysreflexia in spinal clients above T6</li> <li>• If spigot used ensure session not too long</li> <li>• Urodome or condom drainage system can be used. Ensure correct fit and use secure clothing or tubigrip to hold catheter bag</li> <li>• Urethral plugs may be used</li> <li>• Restrict clients with bladder infections</li> </ul>
<b>Menstruation</b>	<ul style="list-style-type: none"> <li>• Unprotected menstruation contraindicated</li> <li>• HIV and Hepatitis B with menstruation contraindicated</li> </ul>
<b>Pregnancy</b>	<ul style="list-style-type: none"> <li>• No hydrotherapy if any bleeding</li> <li>• Liaise with obstetrician if complications with pregnancy or co-morbidities</li> <li>• Be aware of foetal temperature. If pool 34°, vigorous exercise and long session should be avoided</li> </ul>

**SKIN**

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<b>Surgical wounds, open and infected wounds, tracking bone sinus</b>	<ul style="list-style-type: none"> <li>• Do not consider unless occlusive dressing keeps area totally waterproof</li> <li>• Some dressings require time for maximum effectiveness of adhesive</li> <li>• Watertight sleeves may be used</li> </ul>
<b>External fixateurs, Illazarov's</b>	<ul style="list-style-type: none"> <li>• Liaise with managing surgeon</li> <li>• Ensure correct pool chemistry and infection control protocols adhered to</li> <li>• Check exit sites</li> <li>• Entry can occur with or without protective sleeve/dressing/spray bandage</li> <li>• Possible risks include infection tracking to bone, osteomyelitis</li> </ul>
<b>Skin grafts/donor sites</b>	<ul style="list-style-type: none"> <li>• Ensure healing is complete or use waterproof sleeve</li> <li>• Take care with use of equipment</li> <li>• Use protective clothing, eg socks, leggings to protect from pool surface</li> </ul>

<b>CONDITIONS</b>	<b>PRECAUTIONS</b>
<b>Small wounds</b>	<ul style="list-style-type: none"> <li>• Seal with waterproof occlusive dressing</li> </ul>
<b>Altered sensation (eg people with paraplegia or muscular dystrophy)</b>	<ul style="list-style-type: none"> <li>• Use protective clothing, eg socks, leggings to protect from pool surface</li> </ul>
<b>Tinea and plantar warts</b>	<ul style="list-style-type: none"> <li>• Use appropriate protective footwear poolside</li> <li>• Dry feet well</li> <li>• Use correct medicinal powders and creams</li> <li>• Encourage client to bring a bath mat to use in changeroom</li> <li>• Ensure floors are cleaned regularly with appropriate cleaning agent</li> <li>• Cover plantar warts</li> </ul>
<b>Skin rashes/lesions</b>	<ul style="list-style-type: none"> <li>• Check history</li> <li>• If infected refuse entry</li> <li>• If dermatitis or psoriasis, may prefer to wear shirt in pool</li> <li>• Monitor use of other chemicals, eg soap, and recommend pH neutralising lotion</li> </ul>
<b>Chemical sensitivity eg bromine, chlorine allergy</b>	<ul style="list-style-type: none"> <li>• If bromine allergy, recommend no immersion in bromine pool</li> <li>• If chlorine allergy, check history true chlorine allergy or reaction to pH</li> <li>• Ensure pool chemistry meets standards</li> <li>• Shower on exiting and use appropriate skin care, eg moisturiser, pH balancing lotion, barrier creams</li> <li>• Trial for short period</li> <li>• Have appropriate medication poolside</li> </ul>

## **EYES & EARS**

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<b>Visual impairment</b>	<ul style="list-style-type: none"> <li>• Use railings</li> <li>• Explain design of pool in detail and orient to layout at the start of first few sessions</li> <li>• Client may wear glasses in the pool if not swimming</li> <li>• Optical goggles and masks available for swimming</li> <li>• Care with contact lenses if swimming</li> </ul>
<b>Ear infections, grommets</b>	<ul style="list-style-type: none"> <li>• Monitor repeated infections</li> <li>• Liaise with treating doctor</li> <li>• If grommets, use commercially available earplugs and head bands or caps.</li> <li>• Evaluate aims of hydrotherapy for client. Treatment need not require immersion of head</li> <li>• Use commercially available drying fluids after pool sessions</li> </ul>
<b>Hearing impairment</b>	<ul style="list-style-type: none"> <li>• Check hearing aid removed or kept totally dry if not waterproof</li> </ul>

## **CONDITIONS PRECAUTIONS**

### **OTHER CONDITIONS**

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<b>Acute inflammatory conditions</b>	<ul style="list-style-type: none"> <li>• Monitor time spent in pool initially</li> </ul>
<b>Plaster cast/ plaster of Paris</b>	<ul style="list-style-type: none"> <li>• Liaise with appropriate medical practitioner</li> <li>• Use commercial sleeves to protect plaster ( allow air to escape before full immersion)</li> <li>• If using commercial sleeve, limit time of immersion as perspiration can wet plaster if immersion longer than 30 minutes</li> <li>• Waterproof plasters are available but require waterproof lining. Waterproof plasters and linings still have a limited ability to survive repeated immersion. Some practitioners recommend three full immersions only per week and care to cover during daily shower/bathing</li> </ul>
<b>Heat sensitive conditions (eg MS, chronic fatigue, lymphoedema)</b>	<ul style="list-style-type: none"> <li>• Monitor pool temperature, if &gt; 34.5-35 do not allow entry</li> <li>• With MS and CF limit initial treatment time to prevent excessive fatigue</li> </ul>
<b>Radiotherapy</b>	<ul style="list-style-type: none"> <li>• Not a contraindication</li> <li>• Check with oncologist</li> <li>• Monitor fatigue</li> <li>• Monitor skin care and skin sensitivity</li> </ul>
<b>Specific medication</b>	<ul style="list-style-type: none"> <li>• Clarify side effects</li> </ul>
<b>Weight loss clients, morbidly obese</b>	<ul style="list-style-type: none"> <li>• All screening data apply</li> <li>• Ensure that facility has resources to cater for clients' needs including seating and the ability to rescue client from the pool</li> <li>• Be aware of limitations of hoist eg maximum load</li> <li>• Identify occupational health and safety risks</li> </ul>
<b>Fear of water</b>	<ul style="list-style-type: none"> <li>• Ensure sympathetic client approach</li> <li>• Undertake careful, close handling</li> <li>• Avoid deep end</li> <li>• Modify choice of techniques</li> </ul>
<b>Significant behavioural/ cognitive problems</b>	<ul style="list-style-type: none"> <li>• Know client well</li> <li>• Conduct quiet session</li> <li>• Pre-empt behaviour</li> <li>• In an education setting may need to look at supervision appropriate to behaviour</li> </ul>
<b>Psychiatric clients eg suicidal, depression</b>	<ul style="list-style-type: none"> <li>• Increased supervision, one-on-one as necessary</li> </ul>
<b>Intoxicated client/drug abuse</b>	<ul style="list-style-type: none"> <li>• Postpone treatment</li> <li>• High dependency supervision</li> </ul>

## APPENDIX III: INFECTION CONTROL

The Australian Physiotherapy Association's *Policy 66, Infection Control. Including blood-borne and sexually transmitted viral infections.* (May 2001)

All APA members should take stringent precautions against infection, to protect their clients, their staff and themselves. It is important that members keep up-to-date with national infection control guidelines, and implement them in their practice.

Infection control procedures should be based on documents endorsed by the Communicable Diseases Network of Australia and the National Centre for Disease Control. These bodies are currently consulting with the public to revise the documents:

- **Infection Control in the Health Care Setting – Guidelines for the Prevention of Transmission of Infectious Diseases** (National Health and Medical Research Council/ Australian National Council on Aids 1996).
- **Creutzfeldt-Jakob Disease and Other Human Transmissible Spongiform Encephalopathies: Guidelines on client management and infection control** (NHMRC 1995).

The revised draft text of Infection Control in the Health Care Setting is currently available on the Internet, and the APA has a link to this website through its own website: [www.physiotherapy.asn.au](http://www.physiotherapy.asn.au). The link is accessible in the APA Members section, under 'Standards and Guidelines'. Alternatively, the draft text can be accessed directly through [www.health.gov.au/pubhlth/strateg/communic/review/](http://www.health.gov.au/pubhlth/strateg/communic/review/).

Members are encouraged to keep in touch with the progress of revision through these websites, and should obtain the revised edition of **Infection Control in the Health Care Setting – Guidelines for the Prevention of Transmission of Infectious Diseases** when it becomes available.

Adopted: Board of Directors, May 2001

## APPENDIX IV: HYDROTHERAPY POOL WATER MAINTENANCE

Hydrotherapy pool water that is incorrectly maintained can result in a:

- health risk to users including spread of infection
- discomfort to users
- damage to equipment and fittings
- inefficient and costly operation

Water quality is dependent on:

- filtration
- water balance
- disinfection

Each State and/or Council has minimum guidelines for pools and spas available for public use, ie Water Purification Standards for Public Swimming Pools. These may vary from

State to State. They will include routine tests with recommended frequency of testing. Many local Councils run Pool Plant Operators' courses for those responsible for the maintenance of the pool water.

Hydrotherapy pools are not spas. There usually are separate guidelines for the maintenance and chemistry of spas.

Pool managers must keep up with the latest developments in pool water maintenance.

The Standards Australia Hydrotherapy Pools AS3979-1993 is available from Standards Australia in each State.

Contact your Local Council/Health Department for local guidelines. In many States, the local Aquatic Physiotherapy Special Group of the APA will have details of appropriate contacts.

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