

All about Ice Baths ... the facts.

- Why are Ice Baths used?
- Who uses Ice Baths?
- Which set up is right for YOU?



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Teams from 40 nations used iCools at the Olympic Games.



Cameron van de Burgh
Olympic Gold Medal
100m Breaststroke
iCool User



Who uses Ice Baths?

ATHLETES

Today, athlete's at all levels of sport and in almost every country use iCools as an essential part of their condition training and for effective recovery from soft tissue and muscle trauma after sporting events. The list of sports now using iCools is almost endless. From football to motor racing to cycling, running, swimming, triathlons, skiing, yachting, boxing, wrestling, tennis, baseball and the list goes on and on.

In the 2012 Olympic Games and the Paralympic Games, teams and athlete's from almost every major country used ice bath's and the overwhelming majority of those used iCool ice bath equipment. In the 2012 Tour de France almost every team used iCool ice baths.

Today, wherever there are serious athlete's and sport's teams you will find ice baths being used.

ENTERTAINMENT INDUSTRY

iCools are now increasingly used by movie stars, dancers and entertainers to maintain a high level of fitness and to recover quickly from the rigours of their demanding profession.



CORPORATE EXECUTIVES

An increasing number of executives within the world's most successful companies are using iCool equipment as part of their commitment to personal fitness and mental alertness in an ever more competitive business world.



MEDICAL

Because of the successes in treating athlete's injuries, ice baths are beginning to be used by an ever widening range of therapists to treat everything from muscle and soft tissue damage in the general population, to the treatment of osteo and rheumatoid arthritis. Studies are also underway to examine the effectiveness of iCool equipment for patients with degenerative illnesses.

Ice baths are also used in some advanced surgery procedures to lower the patient's body temperature and it is now well documented that rapidly lowering a trauma patient's body temperature during transportation to a hospital, dramatically increases survival rates and can limit brain damage. Many other medical uses for ice bath technology are being studied around the world and iCool is developing new compact mobile medical devices based on this emerging technology.



MILITARY

Various arms of the military in many advanced countries are using ice bath technology in new and effective ways, such as in-field training and rapid recovery from heat exhaustion. Many new applications are being studied, including rapid muscle strain and soft tissue trauma treatment.



Why are Ice Baths used?

RECOVERY

The most popular and widespread use of ice baths is for the treatment of sports injuries, strained muscles and general soreness. This is widely known as RECOVERY. The science of Athlete Recovery is based on centuries old knowledge that ice packs applied to injuries are very effective in reducing inflammation and pain.

Very stressful sporting activity produces a lot of waste products that build up in the blood supply to the muscles. When the rate of demand for energy is high, glucose in the blood stream is broken down and used by the muscles as the energy source. This produces lactate which is often produced faster than the tissues can remove it and lactate concentration begins to rise. At the same time other waste products begin to build faster than they can be removed. This combination results in an increase in the bodies normal concentration of metabolic acids (a lowering of the bodies pH). This is the primary cause of the pain that athletes experience for the first few hours after hard training or competition.

At the same time aggressive and long duration exercise damages some of the muscle tissue by causing tiny tears in the muscle fibres. This causes the pain that is experienced the next day and sometimes even for a few days.

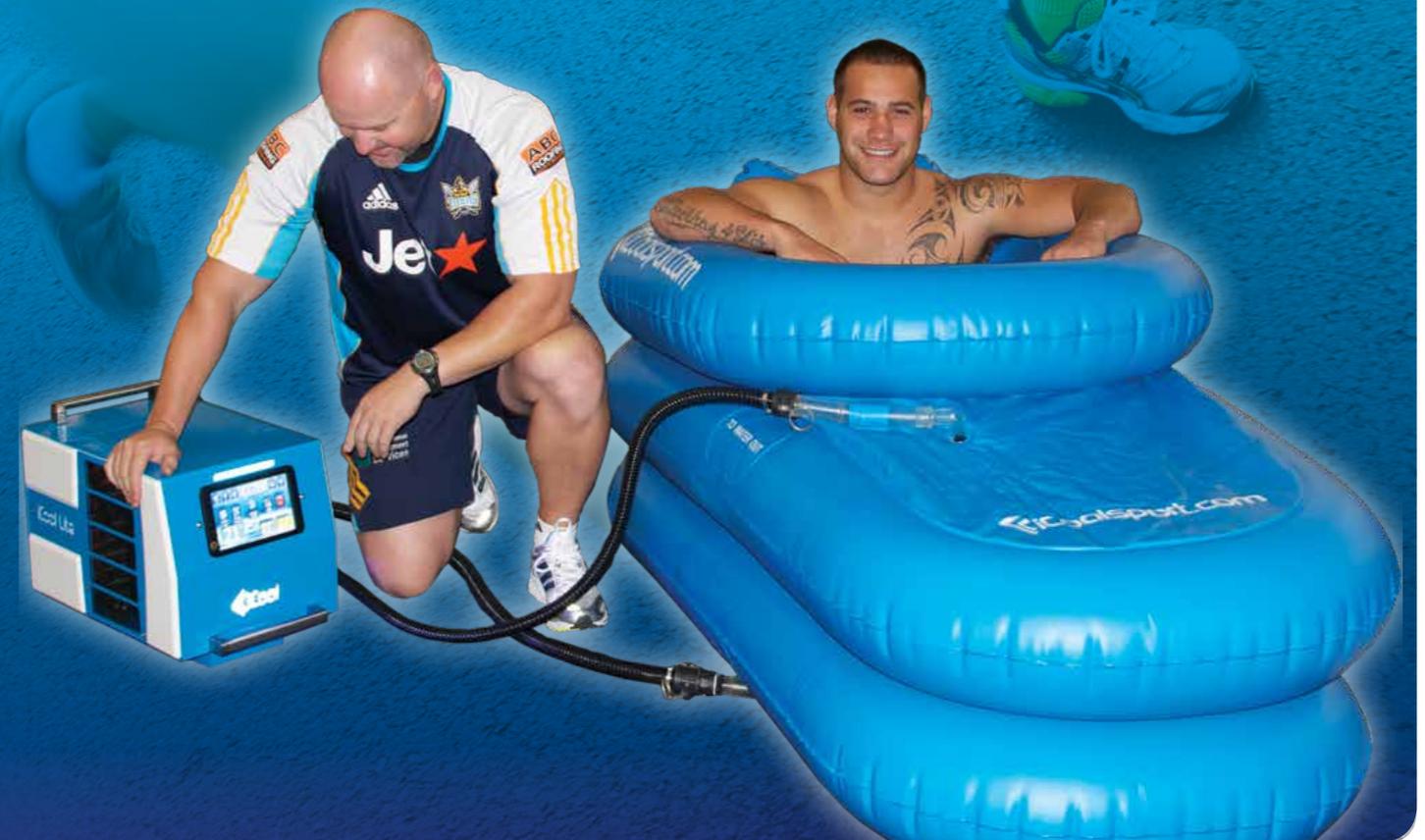
Immersion of the limbs or the entire body in chilled water is the most effective treatment presently available for treating both sources of pain mentioned above and it is very easy to implement with the latest ice bath equipment from iCool.

FASTER HEALING OF TISSUE AND MUSCLE DAMAGE

When any of the body's soft tissues, muscles or joints are damaged, usually the first reaction of the immune systems is the process leading to what is generally described as inflammation.

Inflammation is the immune system's primary defence mechanism against injury and irritation. The redness you see and heat you feel are due to an increase in the flow of warmer blood to the area from the body's core. The swelling is caused by accumulation of fluid and the pain is due to the increase in the blood acid level and the release of other waste products and chemicals that stimulate nerve endings.

Immersion of the affected limbs or the entire body in chilled water is very effective in reducing both swelling and the inflammation and is safer than using pain relieving drugs. Studies have also shown that the use of an ice bath is more effective than anti-inflammatory drugs in many cases and is far safer.



BUILDING ATHLETIC ENDURANCE.

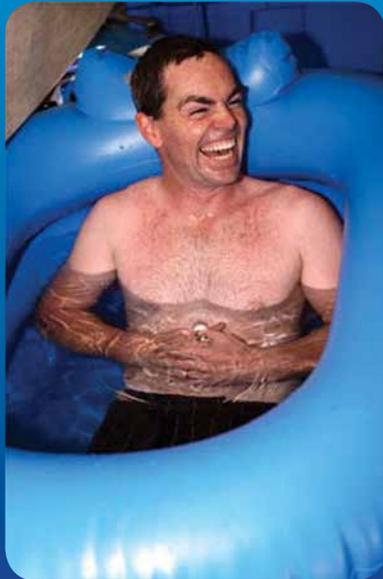
By using an ice bath to remove heat from the body's surface tissues and muscles before training or hard competition, athletes find that they can maintain high levels of activity for longer.

A simple and logical mechanism.

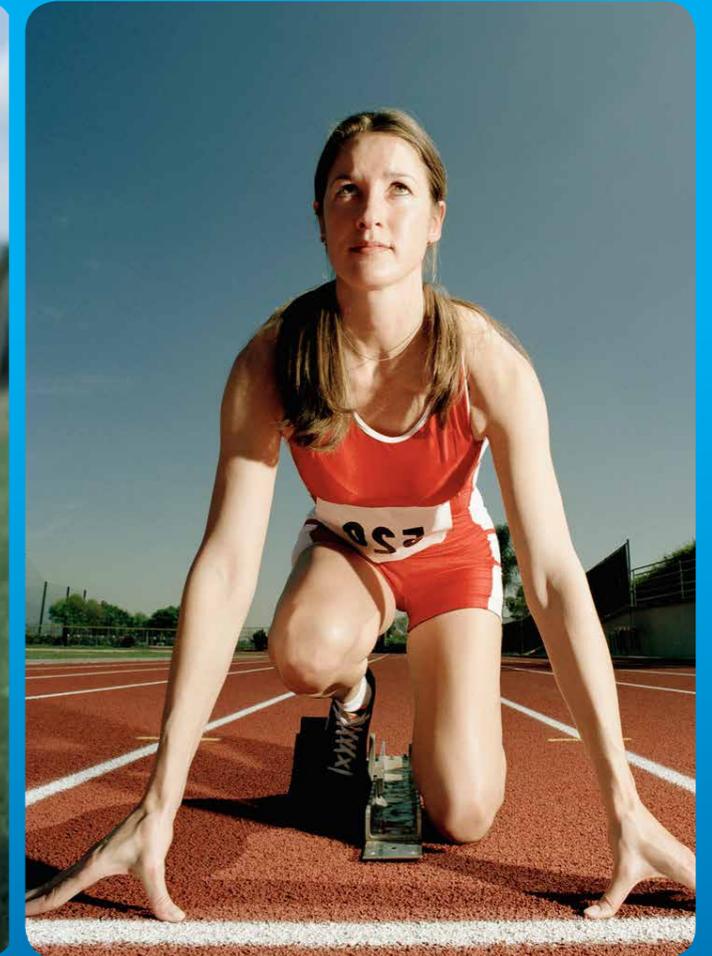
By starting with a lower temperature more of the heat generated in the body by high activity can be accommodated by the body before a dangerously high overall temperature is reached. This allows the athlete to endure high levels of exertion for longer.

Being able to endure longer has major advantages:

- a) It gives the athlete vital extra minutes at peak output.
- b) It allows longer training sessions that can result in a progressive increase in natural endurance.
- c) It allows the athlete a longer period in extreme conditions before dangerously high brain temperatures reduce judgement and reaction times.



The use of ice baths before competition is now widely practiced in motorcar and motorcycle racing and by football teams around the world. An increasing number of football teams are using ice baths in the match breaks to quickly reduce the players body temperature before they rejoin the match. The results have been very effective. Players, drivers and riders all report that they can remain mentally focussed for longer in hot conditions.



IMPROVED SLEEP PATTERNS AND A FEELING OF CALMNESS AND WELLBEING.

One of the most important benefits of ice baths is also the most widely reported by athletes. The overwhelming majority of athletes report that they sleep more soundly and they feel more calm and relaxed the next day. This has been so widely reported and is such an important benefit, that expert studies are now underway to determine just how this works.

How Does Ice Bath Therapy Work?

'Flushing' of waste chemicals from stressed tissues.

During exercise a lot of waste products are produced within and around the muscles as the body converts fuel into energy. As exercise continues a point is reached where these waste products build faster than they can be removed by normal blood flow. Eventually the build up becomes excessive which leads to the pain caused primarily by the increase in acidity. The pain is a signal that you are reaching your bodies maximum endurance level and eventually the concentration of waste products makes it very difficult for the muscles to convert any more 'fuel' into energy. You feel exhausted and sore.

Once the exercise stops your body has a natural mechanism for removing the waste products through normal blood flow to and from the main organs. However this is a slow process and can take many hours.

By immersing your body in an ice bath at the correctly controlled temperature, the sudden drop in the body's surface temperature signals a potential life threatening emergency to an area of the brain known as the hypothalamus that controls body temperature, hunger, fatigue, sleep, and circadian cycles. The hypothalamus immediately directs a response to prevent you from freezing to death. Blood flow is quickly directed away from all surface tissues to the body's core to preserve your remaining heat. In doing so all of the built up waste products in the blood are carried quickly to the major organs where the waste can be removed.

In summary, the ice bath 'tricks' the brain into believing that you are freezing to death and it initiates a rapid flow of blood from the muscles and soft outer tissues back to the liver and other major organs where toxins can be removed and the blood balance returns to normal much sooner, in fact hours sooner than at normal room temperature. The result is a much faster RECOVERY than would otherwise occur.

Why iCool?

Most of the mobile ice bath systems in use around the world today are manufactured by iCool in Australia, so we must be doing something right ...

Although automatic ice baths are in widespread popular use by elite athletes around the world today, it was not long ago that the only way to cool a portable or mobile ice bath was with large amounts of ice. That was before iCool designed and developed the first practical portable cooling system for ice baths. These are the iCool's that are seen at major sporting facilities all around the world today.

iCool technology has freed athletes and sports specialists not only from having to find large quantities of ice, but for the first time they have the ability to carry out ice bath recovery and training sessions either at home or in the field with great accuracy and consistency and for as long as they wish, which has not been possible with ice. Today, using an iCool it is practical to carry out tightly controlled ice bath protocols almost anywhere on demand.

The technology developed by iCool to make this possible turned out to be much more difficult than anyone would have expected. On our website there is a full technical explanation of just how difficult it is to cool large volumes of water and how we solved the significant problems.

Read more at www.iCoolSport.com



Time Line of iCool's Award Winning Innovation

Detailed up to the minute brochures and specifications of all models shown are available at www.iCoolSport.com

Choose the Ice Bath system that is right for you:

iSprint | iSprint Twin | iBody | iSquad | iTeam

CHOOSE YOUR ICOOL MOBILE POOL	WATER CAPACITY:	USE WITH:	DETAILS
iSprint 1 Person 	170 Litres / 45 US Gallons	SHOWN LEFT TO RIGHT: ULTRA PORTABLE SLOWER COOLING ULTRA PORTABLE FASTER COOLING MOBILE VERY FAST COOLING MiCool Lite Compact Twin 	Perfect for cycling, triathletes, footballers, runners. Very compact and lightweight combinations for recovery anytime, anywhere.
iSprint Twin 2 Persons 	230 Litres / 60 US Gallons	Lite Compact Twin 	All the features of the iSprint combinations, with space for two athletes at once.
iBody 1 Person 	350 Litres / 90 US Gallons	Lite Compact Twin 	iBody is the world standard in mobile ice baths, perfect for entire body emmersion, high level of comfort, extensive insulation for fast cooling and low energy usage.
iSquad 3-4 Persons 	520 Litres / 140 US Gallons	Compact Twin Compact XP 	Perfect for recovery sessions for small teams either indoor or out. Comfort, high strength materials and energy saving design.
iTeam 5 - 6 Persons 	890 Litres / 234 US Gallons	Compact XP TurboCool 	The ultimate in mobile pools for a big team. Provides full ice bath and contrast recovery for the whole team - home or away. Take full scale recovery with you anywhere.



**iCool is a major player in fixed installations.
Any size, Anywhere in the World.**

SIMPLE LOW COST INSTALLATION AND COMPLETE POSITIONING FLEXIBILITY

Designed exactly for the purpose iCool TurboCools do not need expensive special plumbing or electrical wiring. iCool TurboCools only require one single standard 40mm polystyrene swimming pool pipe to the pool or tub and one matching return pipe and these two pipes can be mounted almost anywhere, below the floor, above the floor or even in the ceiling.

Although the TurboCools are very powerful, they can still operate from any standard single phase electric power outlet, they do not need expensive 3 phase wiring because they are actually 2 heat pumps in one cabinet that are programmed to start and stop independently and to efficiently share the load.

There are no restrictions on where TurboCools can be mounted in relation to the pools, either above or below or on the same level as the pool and anywhere within 25 meters. The TurboCools can be floor mounted, wall bracket mounted or even ceiling mounted. No other equipment has this level of flexibility.

LOWEST POSSIBLE OPERATING COST

iCool specifically designed our TurboCool systems to save a lot on electricity costs. Other installers must purchase general industrial water chillers and these have substantial drawbacks when used for ice baths. Firstly they have only one large high current compressor that is either on or off and therefore not conducive to power saving management. iCool systems are actually 2 completely independent reverse cycle heat pumps inside a single cabinet. This arrangement allows for very effective power management across the widest range of loads that occur during every 24 hour cycle. Only the iCools can shed power in predetermined steps and even shut down one side of the system altogether when the extra power is not needed. This saves a lot of electricity over a year. >>

For stadiums and gymnasiums iCool manufactures the best equipment available.

For Stadiums and large gymnasiums, the best solution for ice bath therapy requirements is often a fully built in system with the capacity to accommodate a large number of athletes.

iCool has successfully installed the ice bath systems in many large stadiums, sports clubs and gymnasiums and we have accumulated a great deal of experience in how to do this at the lowest cost.

THE MOST ECONOMICAL TO PURCHASE, TO INSTALL AND TO OPERATE

Because iCool equipment is designed for one specific purpose and is not just a modified off the shelf chiller, iCools usually costs less to purchase, are much less costly to install and use much less electricity. All iCools incorporate every features ice bath owners need such as full colour touch screen operation.





Our intelligent power management software monitors heat load, ambient temperature, refrigerant condensing temperature and how close to the users set temperature the pool water is. All of this data is fed to an on board computer and a pre-installed program makes the best decision about how much cooling power is actually required. Whenever possible it will drop back to a single heat pump at the lowest appropriate power.

Our TurboCool model can remove a huge 10,000 watts of heat from the water at full power, but due to the very high efficiency of the system it uses only a maximum of 3,800 watts of electricity to do this. While running at the highest power setting it will cost about 70c per hour at today's rates in most countries, but as soon as the water reaches the set temperature the system calculates the actually heat load and how fast the water temperate rises or falls from the set temperature and reduces to the power to the exact level necessary to maintain your set temperature to within 1°C. This can be as low as only 500 watts at an averaged duty cycle and with only one heat pump in operation. Running at the lowest power setting, it can cost as low as 10c per hour at today's rates.

The power savings can be even greater in the heating mode when compared to standard electric pool and spa heaters. Typically an iCool TurboCool would use up to 70% less electricity to heat the water than a standard electric element spa heater.

ALMOST INFINITE RANGE OF POOLS TO CHOOSE FROM

iCool manufactures large built in pools of various sizes, however we do not restrict our clients in the choice of pools. There are countless spa pools of every shape and size available from spa pool manufactures in most countries and iCool equipment can be easily and inexpensively fitted to any of them to meet any layout and any size requirement.

EXPERIENCE AND REPUTATION

iCool has hundreds of clients at the highest levels of sport all around the world and we enjoy an excellent reputation for our products and our services. A list of many of our clients can be seen on a running ticker tape on the home page of our web site and in other parts of our web site.

The World's No 1 Ice bath Manufacturer. Used By Thousands Of The World's Top Athletes.

iCool is a Registered Trade Mark worldwide. iCool products are protected by various Patents and Patent A applications.

info@icoolsport.com | www.icoolsport.com