

INTERVIEW COMMENCED

Q. How has Neurocryostimulation changed the way you treat injuries?

A. It's probably simplified the acute injury management in that we are not grabbing for ice packs all the time after somebody gets hurt. We can apply the Neurocryostimulation(NCS) quickly, then compress them. So we can go freeze(NCS), compress, freeze, compress, freeze, compress.

Q. When you say "compress", are you bandaging ?

A. With elastic bandages or pressure pumps. So it's simplified that. It's not as messy. It's easier.

Q. And it's quicker?

A. And it's quicker.

Q. It gives you a lot more control over that acute inflammation cycle?

A. Yes, because we can compress - we can compress a larger percentage of the time whilst still getting the benefit of the ice. That's for acute injuries. For chronic injuries, we use it a lot more right before training, right after training, sometimes early post-operatively if we are getting someone to do some exercise, we use it through training again for pain. We freeze it, freeze a certain part of their knee or their ankle that's giving them some pain so they can continue training. So you can do that without wasting time of having to go and ice someone.

Q. So you can quickly spray them and they can continue their exercise or rehab?

A. Yes, it streamlines the whole process. It's more efficient.

Q. What's a good example of how you've changed your treatment protocol when treating an injury with the Cryo One as compared to ice -perhaps a rolled ankle or muscle strain?

A. A good example of that would be an acute cork. So an acute haematoma or an acute small strain because we can quickly reduce the blood flow and get some good vasoconstriction with the **Neurocryo** and then compress them straightaway . After we have compressed for a time and are happy that we're getting some clotting, we rip the compression off and freeze(NCS) again. So it is far more efficient. Whereas with an ankle being inside an ice bucket and standing up is still pretty good because you want someone to get some movement in their ankle while they've got some weight on it. So ice buckets for ankles are still really good. The Cryo is really good for injuries where you can't put something into a bucket.

Q. What were you doing last year(2006) when treating a strained muscle or cork -before you had the Cryo One?

A. Last year, initially, we'd (sort of) toss up whether to use a traditional ice pack or compress an acute soft tissue injury- because you're trying to stop it bleeding and make it clot, but you're also trying to reduce the blood flow. So we'd do a little bit either way; we used to ice first and we used to try and compress on top of it or we used to just purely compress and then ice later. But I guess with the Cryo now, we can quickly spray twice,

only a minute or so apart, and then compress. So we're getting the best of both worlds.

Q. How long do you do the compression for before you then treat again?

A. Depending on the size of the injury, somewhere between 5 and 15 minutes. For something that you think is really going to bleed, you might give it a really good squash for 15 minutes to try and get it to clot, or start to clot a little bit. Whereas, if it is something rather small, maybe just 5 minutes of compression and then we'll reapply the Cryo because I think probably the best benefit of the Cryo is to get some rapid vasoconstriction, whereas with compression you're trying to get some clotting, and that's what you want to do after an acute injury, is reduce the blood flow and get it to clot.

Q. Because of the internal bleeding happening between the muscle tissues?

A. Yes -You can't change the primary damage. The damage is done. But you can minimise the secondary damage which can really reduce the recovery timeframes.

Q. Have you found by using the Cryo, a player has less pain from the injury and more freedom of movement?

A. If he's got less pain, it is more likely because we can apply the Cryo a number of times and have him compressed more in a shorter period of time. So its greatest gift is its efficiency. It really streamlines the whole process. For minor niggles or muscle soreness, we find we can quickly apply the Cryo to a larger area right under a calf, whereas it might be difficult with an ice pack. To apply the ice pack to several different

areas and apply an ice pack properly for 15 minutes to 40 is probably going to take you an hour. Whereas within the hour, with the Cryo, the guy could have had 5 or so applications of the Cryo, plus a massage, plus a stretching session, plus some compression, plus some light activity. So you get much more value for your time.

Q. So the recovery times in essence should be shorter with the Cryo than ice?

A. The recovery times should in theory be reduced because you can minimise the secondary damage by use of the **Cryo-One** because you're getting more compression, stronger vasoconstriction.

Q. Plus that effect of the deep vasodilation as well, it gets rid of the enzymes causing the bruising.

A. I've actually found that the bruises form much more quickly with Cryo than ice.

Q. And they also dissipate much quicker ?

A. Yes. I've found that, a small amount of bruising will come up much quicker. So in theory I guess you're accelerating the whole clotting and clean-up process.

Q. That's what Cryonic-Medical says is happening. We saw that when you treated Mark Gasnier (after the first test against England), the bruise come out at the end of the session.

A. I've since treated another couple of hip pointers similarly and have had good results. We had a guy who had quite a large hip pointer.

Q. When you say hip pointer, what do you mean ?

A. When there's a contusion to your iliac crest, which is a pretty common injury in rugby league/rugby union .It occurs when you have a knee ,shoulder or an elbow hit you right on your iliac crest .You often miss a game from those. We had a player who had quite a large one 48 hours before a game last week and we applied the Cryo through that evening, the next day and the guy played relatively pain free, which I think is a pretty good improvement because you can often miss a game if you have a bad hit.

Q. Was it a medium size one ?

A. Yes, that's right, it was probably of medium size. He could continue to run after he got the hip pointer. He was visibly affected. The worst ones generally have to leave the field. And a minor one a player will tell you about after the game. The medium-sized one that a player gets is clearly visible on the field as it affects their movement and they can often miss the next week.

Q. A 48 hour turn around for a medium cork ?

A. Yes, he was playing in 48 hours.

Q. That was really good?

A. It was really good.

Q. So was that first grade or second grade?

A. First grade , it was Tony Kane. He played five eighth for us last week.

Q. The other week you mentioned that Josh Morris had a similar injury from the City/Country game?

A. He had a medium-size hip pointer again in the

City/Country game on the Thursday night and had a lot of Cryo when he returned from Coffs Harbour on the Friday.

Q. You said you gave him about 12 or 15 treatments?

A. Yes.

Q. What time period was that in?

A. Within 3 to 4 hours and we were doing it in about 15 minute intervals.

Q. What were you doing in between the cold treatments ?

A. Stretching, massaging, general recovery movements in the pool, all those sorts of things. He is a good example at grade level where he was able to play fit for selection on the Friday but the coach opted to rest him. He did a hard training run on the Saturday morning and completed that fine. So he would have been able to play within 24 hours after the injury.

Q. In the past when you were just using ice for this type of injury, he most likely would have been ruled out or really struggled?

A. Definitely - he more than likely would have struggled. I think it works so well for that kind of injury because they are quite a superficial contusion and are across a large area. So you can apply the Cryo to a large area. Whereas, your ice pack, depending on the size of your ice pack, your contact is only going to be about the size of the palm of your hand.

The other thing with the ice pack is that you're relying on the player to apply the ice pack to the correct spot, whereas with the Cryo I know where it is going.

Q. You can pinpoint it exactly?

A. Yes.

Q. What about during matches, have you used it during matches?

A. No, simply because I'm generally the only person that applies the Cryo and I'm running on and off the field, so I can't, but--

Q. No time?

A. I could see a role for it, but I'm running around assessing whether players are fit to return on the field.

Q. How do you use it on Chronic injuries?

A. Chronic injuries, when we train consecutive days and you've got post exercise tendon soreness, post exercise patella femoral soreness, kneecap soreness, those sorts of things is what we've used Cryo on for a fair few of those.

Q. You were using it pre-season/post-op on Matthew Head, last year?

A. Yes, him and Dean Young as well.

Matthew had an anterior cruciate ligament injury and he had an associated posterolateral corner injury. He underwent what's called a posterolateral augmentation ,a procedure where he had a really thick band called an iliotibial band on the outside of his leg cut and looped around his lateral ligament in his knee to provide more lateral stability. It's a very painful recovery because you get a lot of lateral knee pain.

So we had to try and get his muscle strength up as quickly as we could .Which meant he had to do a lot of knee flexion exercise, but knee flexion exercise would aggravate his lateral knee pain. So we'd Cryo him, train,

Cryo him and continue his training and finally Cryo him after training, so he pulled up better the next day.

Q. You mentioned earlier in the year he slept through the night without painkillers after receiving regular treatments.

A. Yes, I think it relieved him of quite a bit of pain.

Q. You spoke about pre and post-training. Do you use the Cryo for the pain arising the day after a hard weights session?

A. Delayed onset muscle soreness?

Q. Yes. Do you treat it for that or you don't worry about it?

A. Yes. With delayed onset muscle soreness, one of the main causes that has been proposed is widespread microscopic tearing of the muscle fibres. So you get microscopic tearing and you get low grade widespread inflammatory responses. That's one of the causes, although it hasn't really been 100 per cent confirmed. So over a whole calf we can use the Cryo really quickly, whereas it's hard to ice a whole calf unless you're emersed in a bucket or an ice bath, which is really painful. We do use it for post-training muscle soreness, post-game muscle soreness.

Q. What other common injuries do you find the Cryo helpful with ?

A. I've found it best for treating contusions.

Q. A contusion is a haematoma ?

A. Yes, and they're generally associated with a fair bit of swelling and spasm . The Cryo has really made the whole treatment process far more efficient because you can spray, compress, massage, stretch.

Q. One of the results of thermal shock from NCS is the myorelaxant effect. How has it impacted on muscle spasm ?

A. It's reduced muscle spasm. It's been really good in reducing the muscle spasm that you get from training and muscle strain. If you get a muscle strain, you need to rehabilitate the strain by exercising that muscle, however the rehab exercise is fatiguing and irritating to the strained muscle as it increases the tone in that muscle. So in turn the muscle spasms and the Cryo-One really reduces the spasm. The other way to reduce the spasm is to massage, but you don't necessarily want to massage a strained muscle after injury because you can make it bleed.

Q. Do you ever get any cramping? Do you use it on cramps, or is that just a minor issue?

A. We have used it on soreness from camps. Most of the time when players have got a cramp they'll be on the field. In rugby league there's only a certain a number of interchanges and they have to stay on the field. We have used the Cryo on soreness that results from cramping.

Q. How do you see the Cryo-One being used in general practice, a physio practice

A. It is going to increase the efficiency of their treatment because they can apply the Cryo to an acute injury. If a person is in their clinic for an hour, in theory they can apply it four times within that hour. Also within that hour they can have the patient stretching, doing exercises to strengthen the muscles, having some other electrotherapeutic done like ultrasound or TENS or muscle stimulation. So the service is going to be improved because it's become more efficient. So they can apply the Cryo and have them doing certain things. So they can get the person, the client to come in and have a lot better treatment but not clog up the system because they're sitting on a bed with ice on them for 15 minutes.

Q. So could they potentially see another 1 or 2 customers?

A. Yes, and free the beds up. One of the problems with clinics is that you need two beds per person because generally most physios will have two people going at once. They'll be seeing somebody while somebody else is doing something that they've instructed them to do, and so you'd be clearing your beds quicker which means you could see your patients more frequently for lesser number, a smaller number of beds because a lot of the time people are just sitting on a bed with ice on it and wasting that bed.

Q. I have seen that. You could do NCS and a minute later he could be on a machine doing something or doing weights and that?

A. Exactly, yes.

Q. So it's just a matter of people, if they accepted the technology, seeing the potential in changing the way they do their practice, especially if they are busy?

A. That's it. The hurdle is accepting the technology and accepting that the technology is as good, if not better than applying an ice pack, which is traditional. Physios would find it a bit hard to change, you know what I mean. The selling point would be to increase efficiency and to improve outcomes because you're increasing efficiency.

Q. You definitely can see the improvement in outcomes over ice?

A. Yes, I think there is an improvement in outcomes definitely because you can apply more in a certain period of time and you can get more compressions in the areas hitting the secondary damage.

Q. So if a physio in general practice sees a client who did an injury to his hamstring what general protocol would he/she follow?

A. He'd generally be assessed on how severe the injury is. He'd probably have some treatment on the soft tissue that has predisposed him to the injuries, tightness in his back or his posterior hip for his hamstring injury. He'd be shown how to stretch and probably given some preliminary exercises. He may go on some ultrasound or TENS to relax the muscle, at the same time there's some ice on the area, ice and TENS at the same time. So in theory you could assess the person, give them a treatment of Cryo, have them do some exercises, some stretches, give them another hit of Cryo and you get a much better result out of your vasoconstriction/vasodilation because you've done it three or four times in the treatment.

Q. If he did have treatments of NeuroCryostimulation, would you find at the end of those 4 days he'd be 25- 30 per cent better?

A. It's hard to put a number on it, but he'd be in front because his secondary damage would be reduced. It's almost impossible to put a number on it too because it's going to vary with the size of the injury and the location of the injury and the individual.

Q. It is hard to be precise about it because every injury is different and everyone recovers at different rates.

A. Yes, but I think physios should be intelligent enough to see the theory behind how improving your efficiency is going to improve your outcome more than they'd believe that it would make them 20 per cent better.

Q. What's the average time per treatment?

A. Between 30 seconds to a minute.

Q. So you're spending between 50 and 70 cents per spray?

A. Yes. So 50 to 70 cents on gas per treatment .You have to compare that with what an ice machine costs. And what's the laundering of nappies cost? We use nappies for our ice. So what's the cost to wash all the nappies? What's the electricity cost of running an ice machine? What's the rental space of having an ice machine? They're usually quite large. It does add up. What's the maintenance on an ice machine? What's the cost of those ice packs?

Q. The gels?

A. Yes, in the freezer, the same deal plus patients love high-tech. Patients love being treated like elite athletes. Patients love efficiency; in and out, not hanging around.

Q. I think patients are going to like it because they're going to feel the rapid pain relief

A. It's instant. Another point to be made is that the best way you get new patients to your clinic is by doing a good job with a patient and then that patient telling someone else that they should go. Even displaying a good Yellow Pages ad and all those sorts of things, they're never any more than 5 per cent of your turnover. More than 40 to 50 per cent of your turnover is definitely going to be coming from doctor's referrals and from word of mouth.

INTERVIEW CONCLUDED