

## Business Working life

**STARTING OUT** A British invention for patients suffering from heatstroke and cardiac arrest is building up a global reputation, reports **James Hurley**



TIMES PHOTOGRAPHER RICHARD POHLE

Jonathan Weinberg believes that one day his company's Caervest will be on every ambulance and carried by every airline in the developed world

# Could this be the coolest product on the market?

**T**he problem with counting military special forces among your company's customers is that it leaves little chance of securing a testimonial. Jonathan Weinberg, chief executive of BodyChillz, which makes an "ice vest" used to treat people with heat stroke and those who have suffered cardiac arrest, is eager to share the details of winning a contract with "British elite troops"; but can describe the deal in only the vaguest terms.

"Because they are such a secretive organisation, I'm under the [official] secrets act," he says. "I'd love to tell you the story of how we demonstrated it to them. I went to a place that doesn't exist, met some people who don't exist

and saw some cool stuff. It was one of the best days of my life."

Fortunately, not all of the company's users are so shadowy. Its product, called Caervest, has been credited by the race director of the London Marathon with helping to save the lives of runners who collapsed with heat exhaustion. It also has been ordered by construction companies in the Middle East that want to prevent worker fatalities linked to heat stroke.

After spending three challenging years in development, Mr Weinberg says that the East Sussex-based business is now enjoying a rush of interest from investors and potential customers. "It takes years of research, testing, endless multiple patent protections and umpteen

meetings and then, when the ball picks up speed, as it has over the past few months, it really accelerates."

The vest, which costs £500, does not require an energy source. The portable device is placed over a patient's torso and filled with liquid (typically water) to turn to ice

**The vest has saved lives at the London Marathon**

within seconds. The liquid reacts with a chemical powder contained in a series of channels in the polyurethane vest for a rapid cooling effect that its makers say can last more than an hour. River or sea water and even fizzy drinks or urine will produce the same result, handy for those who need to use the vest in remote locations.

Rowley Cottingham, an emergency consultant at Brighton and Sussex University Hospitals Trust, came up with the idea in 2013. Doctors are keen



## NHS falls behind in the race to innovate

BodyChillz is securing interest from markets in America, Asia and the Middle East for its cooling vest (James Hurley writes).

Of particular interest is the United States' fragmented emergency response system, Jonathan Weinberg, the company's founder and chief executive, says. Competition between ambulance service providers will create demand for the vest.

"Because we're the only thing that can do what we do, [the vest] will pretty soon become a requirement because if someone has cardiac arrest and they fail to use it, the family are going to be litigious."

Despite the vest having no shortage of potential in Britain, Mr Weinberg says that the National Health Service is less of a priority. "I don't



## America's ambulance services are a key target

want to complain about our NHS, but where innovation is concerned they don't make it easy. We can save them time, money and lives and every [NHS] doctor and every nurse I've spoken to has agreed with me instantly. Once you move up to someone with a spreadsheet, you get a little bit lost. We would love Britain to be coming on board sooner rather than later, but our focus is elsewhere at the moment because that is what we need commercially."

to cool the bodies of patients who suffer cardiac arrest, as it is thought that this could protect the brain against the damaging effects of oxygen starvation (the basic theory is that a cooled brain needs less oxygen and therefore deteriorates less quickly when it is starved of it). Mr Weinberg, 35, developed the vest alongside Dr Cottingham, Steve Tocker, an engineer, and Will Simpson, a scientist.

It was while Mr Weinberg was showing the product to cardiac experts that he was informed about its applications for heatstroke and it is this area that the company is initially focusing on. "The only way to treat heatstroke is to lower the core body temperature. Putting someone in an air conditioned room is like putting a band aid on a severed artery."

He says that the "world took note" when the vest was used last year to cool an overheating runner at the London Marathon from a potentially fatal 42.1C to a safe 37C in about half an hour. It was used again during this year's race. It was also tested last month at the annual Hajj pilgrimage to Mecca. "They get two million people wandering around in 45 degree heat," Mr Weinberg says. "That is a formula for heatstroke."

He hopes that the trial will convince customers in the region to purchase the vest. A longer-term target is the medical sector in the United States.

The company has recently raised an equity investment of "several million" pounds, Mr Weinberg says which will be used to fund product development, more clinical trials, marketing and hiring of staff.

It's a far cry from the initial stages of the business, when the entrepreneur admits that he struggled to garner support for the venture. "The early years of seed capital are the biggest struggle. It is excruciatingly difficult to get that first few hundred grand.

"Then you hit a tipping point where we are turning away investment, which is a wonderful position to be in."

Mr Weinberg cannot be accused by investors of lacking ambition for the invention. "We have every reason to believe [it] will be a global success. We envisage being on every ambulance in the developed world, every construction site where heatstroke is an issue and we expect it to be on every airline.

"What gives me a buzz is that... every time I sell one, I'm excited [it might] save a life. It's a wonderful reason to get up in the morning and be in business."