

# War, a driver of innovation

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Those of us fortunate enough to have been born during a period of peace and stability tend to view war primarily as a matter of history – a series of violent, life-changing events which have helped to shape the world since the beginning of time. Certainly, when viewed solely through the prism of history, the desperately destructive aspect of war is hard to envisage, but war is not just history – conflicts continue in many parts of the world to this day.

The legacy of war has exerted a powerful influence on the development of civilisations across the globe. If we look beyond the immediate death and devastation it causes, war forces people to work together, organise themselves, pool resources, adapt to changing circumstances, and to diversify. Following conflict, the winning side takes over and ‘absorbs’ the losing side, creating a larger, more culturally diverse society, which ultimately has a vested interest in securing peace and prosperity for its citizens. Ironically, it seems that some of history’s most enduring and creative periods of peace were born out of bloody wars. We know that, by its very nature, war represents an appalling denial of our common humanity, yet for some incomprehensible reason we seem to need war in order to fully appreciate the real value of peace.

8 May 2020 is VE (Victory in Europe) Day, and it marks the 75th anniversary of the formal cessation of hostilities across Europe. To commemorate this event, we have compiled a special edition of *Homeopathy in Practice*, in which we explore how homeopathy can be deployed to reduce the suffering caused by war. This article considers some of the more positive aspects of war, most especially how it has helped to develop our understanding of trauma medicine.

It was hoped that World War II would be defined as the war to end all wars. The horrors unleashed during that conflict, including the mass devastation caused by the deployment of the first nuclear bombs, both shocked and horrified everyone. True, world peace did enjoy a brief outing whilst countries recovered from the immediate aftermath of hostilities but, sadly, it didn’t last. Just a couple of years later, the so-called ‘Cold War’ started, a struggle between the two very different ideologies of communism and democracy. This led to war in Korea in 1950, swiftly followed by conflict in Vietnam, and later in Cuba.

Currently, smaller-scale wars continue to rage. Their causes are usually complex, but they generally include a mix of religion, the settling of old scores, disputes involving territories, and the acquisition of goods. They may be funded or equipped by ‘outsiders’, global powers with a strategic or material interest in a particular country. The intervention of outside global powers in a regional war usually results in a protracted, brutal conflict which causes needless suffering to the civilian population. Under these circumstances, ordinary people may be forced to flee their own country, and seek refuge in a ‘safer’ place. This is currently happening in countries such as Syria, Yemen, Myanmar and Afghanistan, and has resulted in the

displacement of literally millions of civilians, all seeking sanctuary in Western Europe or North America.

It takes careful planning, preparation, and organisation to wage a war, and maintaining a fit fighting-force is an absolute priority. Soldiers have to be fed, equipped, transported, and kept healthy. Sick soldiers need to be treated, and wounded soldiers need to be patched up so that they can be returned to combat as quickly as possible. The effective management of these basic needs is critical, and finding practical ways to stay healthy during active combat has helped to focus our attention on the importance of diet and nutrition – an army really does march on its stomach.

Ongoing access to quality nutrition, combined with adequate, uncontaminated hydration, are fundamental factors in ensuring military capability, and the success or failure of a military campaign has often depended upon the provision of sufficient operational rations. Soldiers need an appropriate diet in order to optimise physical fitness and enhance mental acuity. Good nutrition is also a major contributor to the wound-healing process for those who are injured. But, until relatively recently, the preservation of food in a form that retained most of its essential nutrients, and its safe transportation over long distances, proved to be challenging. One of the most significant innovations in the development of food-preservation came about as a result of finding a way to prevent that scourge of seafarers, scurvy.

During the eighteenth century, scurvy was responsible for the loss of more sailors than enemy action. On long voyages, it was not unusual for up to two-thirds of the crew to die of scurvy. In 1747, a ship’s surgeon named James Lind undertook what was probably the world’s first interventional trial – the results of his investigation were published in 1753, in a paper entitled *A Treatise of the Scurvy*, and his recommendation was to ensure a regular supply of citrus fruit to both prevent and treat the dreaded scurvy. A few years later, Captain James Cook added malt, sauerkraut and wild celery to the mix, alongside a regime of strict cleanliness, and ample supplies of clean drinking water. As a result of introducing these simple changes, not one single crew member lost their life to scurvy during the three-year-long voyage of the *Resolution*. But preserving food on these long voyages remained a problem.

That problem was soon to be solved: in 1800, a French chef, named Nicolas Appert, invented a new way of preserving food for the military by using airtight glass containers. Ten years later, this idea was further developed by Pierre Durand, a British merchant, who experimented with tin-covered iron canisters as a way to both store and preserve food. His idea worked, and the age of packaged food was born. This is just one example (there are many more) where something originally created to meet the needs of the military also turns out to be immensely useful to the civilian population.

When men are sent into battle where they are likely to be killed or injured, there have to be ways to fix the damage inflicted during combat. The skills learned by caring for soldiers on the front line have made an important contribution to the development of modern medicine. Military medicine is about much more than just repairing wounds – soldiers on active duty are under constant physical and mental pressure, they suffer a whole range of deprivations, operate in squalid, disease-infested environments, usually a long way away from home, and they are in constant danger. Caring for them requires the skills of both a doctor and a surgeon.

We have been honing our human repair skills since prehistoric times. Ancient skulls have been found in locations as far apart as Europe, Africa and the Americas, which show evidence of early attempts at neurosurgery. Some show dents, presumably the result of club injuries, where little holes have then been scraped or carefully drilled round the fracture sites, in an effort to repair the brain below. The ancient Romans certainly recognised the importance of ‘patching-up’ soldiers so they could fight again. During an active campaign, legionary surgeons and physicians were a constant presence, sometimes even working on the battlefield itself, in order to close wounds and minimise blood loss. Larger scale, organised care of soldiers continued to evolve during the Crusades, when hospices capable of managing hundreds of casualties at a time, were established. These were the precursors of modern hospitals, and without a doubt their existence saved many lives.

For centuries monasteries offered a place of healing to pilgrims, soldiers and other travellers and, as we know from a number of sources, the monks had an impressive knowledge of herbal and traditional medicine. Gradually, hospitals which looked after the civilian (as opposed to military) population started to become established in cities across Europe, and they provided ideal facilities for the training of nurses, physicians and surgeons. As warfare started to become more industrialised, hospitals began to fulfil more functions – they were still expected to patch up the injured, but they were also expected to take measures to prevent the spread of infectious diseases (a far greater killer than war itself), and to provide rest, nutrition and rehabilitation to recovering soldiers.

The massive scale of the wars waged during the 20th century, and the changing nature of the weapons used in war, resulted in over a 100 million casualties, so it is unsurprising to note that the greatest number of war-initiated medical innovations occurred during that period. Examples of these include airborne and tank-based rescue systems, effective intensive care protocols, and medical care initiatives specially formulated to manage the horrific damage caused by chemical, biological, and nuclear warfare. Other significant innovations include more practical and manageable body prosthetics, and the development of different therapeutic approaches to help alleviate the draining symptoms of post-traumatic stress

disorder (PTSD), a condition only formally recognised in relatively recent times. The field of military medicine has also benefitted greatly from the introduction of computers and efficient data-analysis systems. These have created new opportunities to research the type of medical interventions needed to enhance a patient’s road to rehabilitation, social reintegration, and overall recovery.

No consideration of the history of military medicine would be complete without a brief mention of the important role homeopathy played during the first world war. A small number of homeopathic field hospitals, mostly run by an Anglo-French American collaboration, were established along the front line to treat the many casualties coming in on a daily basis. One American officer, stationed at Base Hospital No. 48, kept a diary of events. He graphically describes the conditions there and, even in this abbreviated extract, you can sense the horror of the situation:

August 2nd, the arrival of the first hospital train ...  
with nearly 300 wounded ... serious stretcher cases ...  
everybody out to carry stretchers ... the sickening stench  
of blood, gangrene and foul air – gas cases, head wounds,  
fractures, walking cases ... many desperate cases ...  
operations hour after hour ... wards loaded ... all types of  
wounds – head, chest, abdominal, arm, leg, fracture cases  
... amputations ... helpless, fed and bathed like babies.

A total of 4,822 sick and seriously wounded soldiers were treated during the active service of Base Hospital No. 48. Of these, 2,960 were surgical cases and 1,862 medical cases yet, despite the appalling conditions described so vividly by the American officer, the total number of deaths was just 85, an average of four times fewer than the death rate recorded at conventional field hospitals.

War ravages populations and destroys social orders, but it also generates a surge of creativity and innovation. Following conflict, most societies feel compelled to repair, restore, renovate, commemorate and celebrate their lost past, and they are prepared to collaborate with others in order to create a safer world. It is true that different cultures have different concepts of what is needed to heal and restore trust in human nature, but the process of reconciliation starts with a return to normality – the resumption of the ordinary rhythms of everyday life which include all the familial, social, cultural and economic activities which help to make the world go round.

We currently find ourselves in a quasi-war situation, where the enemy is an invisible virus, and our national defence-strategy is incomplete. Lockdown, courtesy of COVID-19, is not a great place to be, but we must soldier on, and at least we have homeopathy to help us to stay healthy. The good news is that despite the unusual circumstances, there is plenty of evidence to suggest that innovation is already alive and well, even though we’re still under siege – according to the patterns of war and peace briefly explored in this article, our eventual liberation has every chance of delivering promising results! □