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Hello and welcome to the Health Hits podcast.

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I'm your host Tom Fisher, I'm a British GP but I also have a fascination with history and what we can learn from it.

In this series of podcasts we discuss medical issues and explore their historical origins as well as cutting edge or even future developments. I am especially interested in the human stories that sometimes get lost in these narratives.

Today is a very special episode because on the 12th of May every year we celebrate International Nurses Day, and have done since 1965.

It seemed the obvious date to pick given that it's the birthday of Florence Nightingale, the woman considered to be the founder of modern nursing.

Here is a recording of Florence Nightingale herself talking briefly and humbly about her incredible legacy.

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This was recorded in 1890 with one of Thomas Edison's phonographs onto a wax-coated cylinder. And that's why the quality is not brilliant but what she said was:

"When I am no longer even a memory, just a name, I hope my voice may perpetuate the great work of my life. God bless my dear old comrades of Balaclava and bring them safe to shore"

"When I am no longer even a memory" – clearly what she couldn't've predicted was that nearly 130 years later her legacy would still be celebrated with her name adorning the oldest and best nursing school in the UK, 4 hospitals in Turkey, even banknotes. There are statues of her as far away as Japan and the Philippines, a stained glass window, and even an Italian bedside nursing computer has been named after her.

She lives on in modern memory and her work undoubtedly contributed significantly to average life expectancy rising by 10 years in the latter part of the 19th century.

Born 1820 in an Italian city, you can probably guess which one, Florence Nightingale was the daughter of two wealthy and well connected British elites.

Her father thought it important that she had a proper education and taught her Latin, Greek, history and mathematics.

She wouldn't've had to work but chose to become a nurse after her experience caring for her great aunt in her final illness. Her mother was opposed to this because at the time nursing wasn't really the structured profession it is today. But with a generous allowance from her father she had the luxury to study any and all material she could get her hands on and travelled all across Europe to observe the roles of nurses there.

Medicine at this time, at least in Victorian England, had a solid understanding of the anatomy of the human body, where the organs are, but not a full understanding of what they do, and no concept of water or air-borne disease transmission.

They generally thought that people became ill due to exposure to noxious toxins, this is known as the miasma theory, and so treatments might involve visiting the coast for a change of air or draining out the toxins but using leeches, or poisons that triggered vomiting or diarrhoea.

It was during her observations of medicine across Europe that Florence Nightingale concluded that 19th Century medicine was probably killing more people than it was saving and that focussing on cleanliness, sleep, warmth and food would be more beneficial.

By 1853, aged 33, Florence was working at the Institute for the Care of Sick Gentlewomen in Upper Harley Street, London. This was also the year that Britain, France and the Ottoman Empire went to war with Russia.

The war was fought across the Balkans but it seemed to be a stalemate, so in 1854 the alliance attacked the Russians at Sevastopol on the Crimean Peninsula. There was a Russian counter attack which became known as the Battle of Balaclava and it was during this battle that the famed British Charge of the Light Brigade took place.

This cavalry unit was supposed to be preventing the Russians removing captured field guns but a miscommunication in the chain of command resulted in a head on assault of a well prepared artillery position. These were unarmoured horses and men with swords, riding against a rifleman and cannons, but they still rode as ordered and even reached their objective, attacked the enemy, before the few remaining soldiers withdrew, again under heavy fire.

A poem by Lord Tennyson, Poet Laureate at the time, captures the futile heroism of these cavalymen in that moment of the battle.

There were huge numbers of casualties on both sides, but no proper facilities to care for them. Conditions were squalid and so even the lightly wounded men became sick and died in these military hospitals.

Letters and reports of these conditions reached London, and since Nightingale knew the secretary of war, whom she had met during her travels in Europe, she got his permission to travel with a group of nurses that she herself had trained.

“God bless my dear old comrades of Balaclava and bring them safe to shore”

The Nightingale Nurses travelled to the military hospital in Scutari, in modern day Istanbul, where the wounded had been taken from the battlefields of Crimea, just across the Black Sea.

She found 18,000 wounded soldiers in overcrowded and dirty conditions. Used bandages covered in blood lay all over, there was no proper water and sewerage facilities and rats, lice and cholera were rampant.

During the first winter over 4000 men died, and of that number, 10 times more died from illness contracted in the hospital than from their battlefield wounds.

Nightingale worked tirelessly to improve the hygiene standards in the hospital, ensured a clean supply of water and made sure the men got proper food. She implemented a triage system to rapidly assess the care needs of the new patients arriving every day and importantly, so importantly, she implemented a hand washing policy which would have massively reduced the transfer of disease from patient to patient by the medical staff.

The germ theory of disease, whereby microorganisms are transferred from person to person and cause disease, wasn't really widely accepted over the miasma theory until decades later. I'm not clear as to whether Nightingale understood this, and I suspect that she believed hand washing was effective because she has seen its benefits over the many years she studied various forms of nursing across Europe.

She also wrote back to London appealing for support and received it in the form of a British government sanitary commission which came to sort out the sewerage and ventilation. This massively improved the cleanliness of the hospital.

The government also commissioned the famous engineer Isambard Kingdom Brunel to create a pre-fabricated hospital that could be built in England and rapidly assembled where it was needed. What he came up with was the Renkioi Hospital which consisted of 50 bed ward units or huts which could be assembled together, ultimately to form a 1,000 patient hospital layout.

At their worst, the death rates in Scutari were 42% but after Nightingale's interventions and the impact from the Sanitary Commission's work, that dropped to 2%.

It was incredible.

The men thought of her as an angel and were in no doubt as to who they owed their lives to.

“I hope my voice may perpetuate the great work of my life”

Nightingale kept meticulous records and thanks for her understanding of mathematics and statistics she was able to very clearly demonstrate the causal link between good sanitation and reduced mortality. She presented this data in a visual format, her now famous “Rose Diagram”. It’s a compelling graphical representation of the massive drop in mortality in her hospital between 1854 and 1855. I’ll leave a link to the image on the site HealthHit.info, its well worth having a look.

Her findings were compelling enough for the government to take note and the Royal Commission on the Health of the Army was established to improve the conditions for soldiers in order to reduce their attrition rate from disease.

She took her knowledge and applied it to civilian hospitals as well, establishing the Nightingale Training School in 1865.

There she trained the first true modern nurses, it is still running to this day, and is considered the one of the best in the world.

She continued to set up hospitals and education facilities for years after this and her work on statistics and public health, as well as her reputation for being a compassionate nurse in the most hellish of conditions, cemented her as one of the greatest medics to have lived.

We celebrate nurses on the 12th May and we have all benefitted from their compassionate and informed care.

And since the date is her birthday, we also remember one of the most compassionate and most informed, the mother of modern nursing.

An article in the Times during the Crimean War sums it up well I think:

“She is a "ministering angel" without any exaggeration in these hospitals, and as her slender form glides quietly along each corridor, every poor fellow's face softens with gratitude at the sight of her. When all the medical officers have retired for the night and silence and darkness have settled down upon those miles of prostrate sick, she may be observed alone, with a little lamp in her hand, making her solitary rounds.”

Thank you so much for listening and please join me again for another episode of Health Hits.

