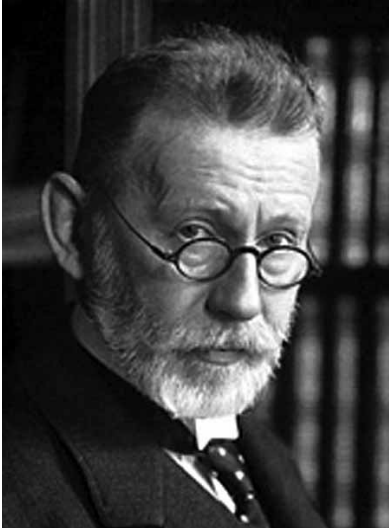


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In 1494 King Charles VIII of France attacked Italy, and on the 22nd of February French soldiers entered Naples (1). The French army were described as causing *'nothing but disorder, pillage, and debauchery'*, and a new disease appeared during the siege of the city. It was characterised by the appearance of a painless sore or swelling in the genital region, which disappeared in two

severely.

Its long-term consequences were brought home to me when many years ago while the medical officer in charge of the Stanhope Lines family medical centre and the thousand or so wives and children of the parachute battalions then in Aldershot as well as the wives, of the 'War Office Employed' – old soldiers who did routine local work around the lines, but not the old soldiers themselves. One day, a pleasant woman said *'I'm worried about my man. He has been odd recently – bad tempered – not like him. And yesterday he threw our cat out of the window.'* So I saw him in their quarter off the record. He said *'Sir, I think it's serious. You see I had a dose when I was in Abyssinia in the war. They burnt it with a hot iron, and it went away. I had a funny sore rash sometime later, but I always wondered if it was really cured.'* He had a cruel scar, certainly, and I wondered if this was tertiary syphilis. I asked the medical consultant in the Cambridge Hospital to see him, and he did indeed have tertiary Syphilis – Generalised Paralysis of the Insane.

weeks. The disease spread fiercely all over Europe, since the army of the French king had soldiers from many nations. At this first date, it was not realised as being venereal in origin (Figure 1). Blame for the new disease resulted in its being called 'The French Disease' by most, but the French called it 'The Italian Disease', the Italians called it 'The Spanish Disease', and the Spanish 'The English Disease.'

While the earliest treatment was mercury in the late fifteenth century, applied locally to the primary sores, and continued for three hundred years, it was Paul Ehrlich whose remedy was the first effective one.

The mysterious disease went unnamed until the Italian physician Fracastoro (1478-1553) wrote a poem 'syphilis sive morbus gallicus' – meaning 'The French Disease.' He was perhaps the first 'syphilis specialist', and described in poetry the comprehensive account of the disease's many manifestations. In his poem the protagonist is called Syphilus, a shepherd who has been struck down by the God Apollo. His poem included a stern moral judgment of the behaviour which was now known to be its cause (2).

Ehrlich was from Upper Silesia in East Prussia – now Poland. He was born in 1854, the son of a lottery-office keeper. He went to the University of Leipzig, and even by the time he graduated in 1878 was interested in the effect of chemicals on the body and the apparent fact that some cells had an affinity

The appearance of Syphilis coincided with the early development of scientific medicine. Its uniqueness as a venereal disease and its social implications and consequences lasted over a lifetime – 'if you know Syphilis, you know Medicine', medical students were taught. 'Never forget Syphilis' said many professors. All from the highest in the lands to the poorest person could have it. It, with Tuberculosis and cancer, was a disease whose proper name was hidden from patients by euphemisms – Tuberculosis was named 'Koch's Disease', cancer 'neoplasm', and Syphilis 'specific infection'.



The spread of Syphilis

KEY			
1495	1496	1497	1499

The venereal origin of syphilis made it a peculiarly military disease, as it was found regularly amongst young men serving away or abroad from their homes, and men involved in active warfare while on leave from the front. Because it led to long-term symptoms, it was feared by their families too (3). Soon the appearance of congenital syphilis in offspring of the sick man was an added horror. It was one condition which was punished, unlike non-venereal diseases – these were not the moral fault of the sailor or soldier. A continent soldier did not catch this disease, and a high incidence reduced the manpower of the unit

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for certain chemicals. When he was a student, the German dye industry was thriving, and newly discovered aniline dyes were available for tissue staining.

Ehrlich was looking for a cure for sleeping sickness, caused by one of the microbes now being discovered by specialists in the new science of bacteriology. He found a chemical called Atoxyl, which was useful but contained the poisonous arsenic chemical. He then began to research for an arsenic compound which he called 'the magic bullet' and would kill the microbe but not the patient. In 1909, after testing over 900 different compounds on mice, Ehrlich's colleague Sahachiro Hata noticed that their compound '606' killed a microbe, newly described by Hoffman and Shaudinn in 1905, the *Treponema Pallidum* spirochete, the cause of Syphilis. Next year the drug was released. It was called Salvarsan. It became an immediate success and was sold worldwide. At last, it seemed that Syphilis was treatable.

But the magic bullet was found effective for only a short period. Patients relapsed within one year. However Ehrlich and his colleagues searched once again. They tested more chemicals. The 914th was now proved to be effective longer and was

marketed as Neosalvarsan. From now both were prescribed, and remained the mainstay of treatment until penicillin arrived.

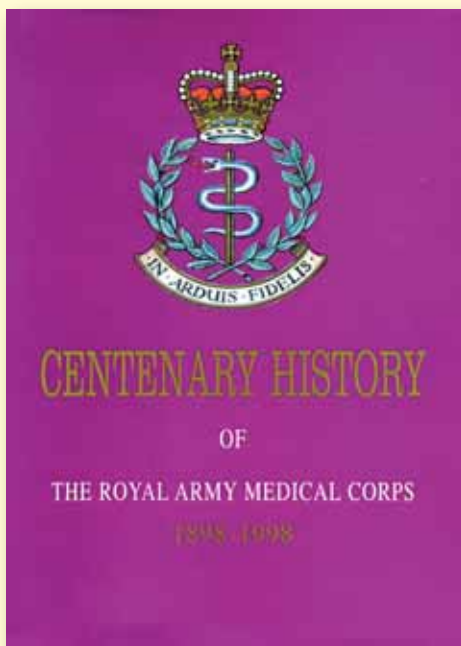
Ehrlich did much more in research over his life. He was appointed Titular Professor in Berlin in 1882, the same year in which he published his method of staining the Tubercle Bacillus which another German, Koch, had discovered. This modified by Ziehl and Neilson led to the stain being still used, and the Gram stain was derived from this too. In 1897 he became Director of the Institute, moving to Frankfurt-am-Main to become Director of the new Royal Institute of Experimental Therapy two years later. He was awarded the Nobel Prize in 1908(4).

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- 3) *The Conscript Doctors*, ed J.S.G. Blair.
- 4) Nobel Prize.org

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