



Scots who made their mark on.....

Medicine 4: Wood and Trout



**Alexander Wood
(1817—1884)**

**Developer of the
Hypodermic Syringe**



Dr Alexander Wood practised medicine in Edinburgh's New Town from the early 1840's. Born in Cupar in Fife he was the son of a doctor and studied at the Edinburgh Academy and Edinburgh University, graduating MD in 1839. He achieved prestige as Secretary to the Royal College of Physicians of Edinburgh in 1850 and later served as its President.

In 1853 in order to deliver a more effective dose of morphine to patients suffering from neuralgia he experimented with his own design of a new hollow type of needle, which he wrote up as a paper in the *Edinburgh Medical and Surgical Journal* in 1855. His instrument is regarded in most quarters as the first "true hypodermic syringe".

Long before Wood's invention, needle-like instruments were known and used by Roman physician Galen in the Second Century AD and by Robert Boyle and Christopher Wren in the 17th Century but the instrument developed by Wood was the first with a refined hollow needle and plunger. Before this invention an incision was first needed in order to introduce drugs beneath the skin. French surgeon Dominique Abel (1679-1730) invented a fine pointed syringe still known by his name. Irishman Francis Rynd (1801-61) had already invented the hollow needle for drip feeding drugs intravenously.

The Our Ireland website says, "In 1845, Dr. Rynd published an article in the *Dublin Medical Press* reporting how he had successfully used a hypodermic syringe to inject fluids into a patient. This was eight years before Alexander Wood, who has mistakenly been credited with inventing the first *Hypodermic syringe* in 1853".

French physician Charles Pravaz (1791-1853) modified Rynd's design creating a 3 cm long tube, 5 mm thick made in silver and operated by a screw mechanism to control the flow of injection and first used it (also in 1853) to introduce iron perchlorate coagulant into an aneurysm. Fellow Frenchman L. J. Béhier popularised Pravaz's needle across Europe.

Ironically the first known fatality through overdose from hypodermic delivery of opiates was Alexander Wood's wife Rebecca Massy, who had become addicted to morphine using her husband's instrument.

Today across the world between 12 and 13 billion syringes are used every year.



reads
Alexander WOOD invente en 1853 la seringue hypodermique— a curious choice given that a French doctor had an equal claim to its invention!



**Jennie Kidd Trout
(1841-1921)**

**First Female Doctor in
Canada**



Canada 1991 from a set of four honouring medical pioneers depicts Jennie Trout in front of the Women's Medical College, Kingston

Jenny Kidd Gowanlock was born in Wooden Mills, Kelso on 21st April 1841 to a family descended from Danes on one side and Swiss on the other. She was taken to the Stratford area of Ontario when she was only six where her family set up a ten-acre farm and were members of the local free Kirk. She was baptised at the age 19 and became a member of the Restoration Movement Church in Toronto. After graduating from Normal School she taught for four years and aged 24 married Edward Trout, the local general agent for the *Toronto Leader* moving with him into the city where with his brother John he founded the respected business financial weekly

Monetary Times.

Because of a series of chronic conditions described euphemistically on the university website as "nervous disorders" which greatly incapacitated her soon after her marriage she decided to become a doctor, from 1871 studying at The University of Toronto. She was then one of only two women admitted to the School of Medicine, but her colleague Emily Stowe (who would become a notable Canadian suffragette) refused to sit her exams because of the university's condescending attitude to woman candidates. Both women were regularly subjected to sexual harassment and embarrassed by the telling of lewd jokes in their company. Trout completed her degree across the border at the Women's Medical College in Pennsylvania, becoming MD in the Spring of 1875, and thus the first woman licensed to practice in the Confederation.

Trout's first move on graduating aged 34 was to open the Therapeutic and Electrical Institute in Toronto specialising in the provision of galvanic baths for women and other electrical treatments, which she had personally experienced during her periods of ill-health. The Institute also ran a clinic providing health care for the poor.

Aged only 41 she retired from practice and moved to the warmer climes of Florida, where she took an interest in Christian missions and became a strong advocate of temperance. Along with her husband she adopted two children, one of them Edward Hunstman-Trout becoming well-known as a landscape architect in California. The family spent the winter in Florida and in the summer months went back to their family home named Gowan Hall in Scarborough, Ontario. On October 2nd in 1883 Trout was opened the Medical School for Women at Queen's University, Kingston, Ontario. Jennie Trout died in Los Angeles, aged 80.

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