Since the desecration of the French kings’ graves in the basilica of Saint-Denis by the revolutionaries in 1793, few remains of these mummified bodies have been preserved and identified. After a multidisciplinary analysis, we confirmed that an embalmed head reputed to be that of the French king Henri IV and conserved in successive private collections did indeed belong to that monarch.

Death of “the green gallant”
Henri IV was probably the most popular French king. He was known as “the good King Henry” or, because of his attractiveness to women, “the green gallant.” Despite being admired by his people, he was assassinated in Paris at the age of 57 years on 14 May 1610 by François Ravaillac, a fanatical Catholic.

Identifying the remains of the French king
The human head had a light brown colour, open mouth, and partially closed eyes (fig 1). The preservation was excellent, with all soft tissues and internal organs well conserved. Two features often seen in portraits of the monarch (fig 2) were present: a dark mushroom-like lesion, 11 mm in length, just above the right nostril (fig 3A), and a 4.5 mm central hole in the right ear lobe with a patina that was indicative of long term use of an earring (fig 3B).

The head also showed evidence of baldness—no hair was present on the pate. Dental health was poor, with considerable antemortem tooth loss; this corresponds with testimonies from contemporaneous witnesses about the king. Lastly, three postmortem inferior cervical cutting wounds were visible, corresponding to the separation of the head from the body by a revolutionary in 1793, in the context of deliberate mutilation.

Analysis of various grey deposits on the head showed an elemental and organic composition corresponding to successive mouldings of the head. We know that three mouldings were carried out on Henri IV’s head: firstly on the fresh head in 1610, then on the mummified head in 1793 just after the desecration, and lastly by a previous owner (Bourdais) of the head at the beginning of the 20th century.

A digital facial reconstruction of the skull was fully consistent with all known representations of Henri IV and the plaster mould of his face made just after his death, which is conserved in the Sainte-Genevieve Library, Paris. The reconstructed head had an angular shape, with a high forehead, a large nose, and a prominent square chin.

Other evidence in favour of the identification
Radiocarbon dating with 2-sigma calibration yielded a date of between 1450 and 1650, which nicely bracketing the year of Henri IV’s death (1610).

We could not recover uncontaminated mitochondrial DNA sequences from the head samples, so no comparison was possible with other relics from the king and his descendants.

Multidisciplinary medical identification of a French king’s head (Henri IV)
Philippe Charlier and a multidisciplinary team explain how they confirmed an embalmed head to be that of the French king Henry IV using a combination of anthropological, paleopathological, radiological, forensic, and genetic techniques.
A very particular embalming method

The autopsy report of King Henri IV, published in the complete works of the surgeon Guillemeau (1549-1613), showed that the brain was not examined. Such an examination was not systematically performed when the cause of death was known (which for Henri IV was two knife wounds made in the thorax by Ravaillac). Another practitioner, Pigray (1532-1613), was in charge of the embalming process, and he took into account the king’s wish to be embalmed “in the style of the Italians.” This form of embalming minimises the mutilating aspect of the embalming procedure by not opening the skull—the brain and all internal structures remain in the skull (no vault sawing, no evacuating trepanation, no ethmoidal perforation). Computed tomography of the head confirmed that no sign of skull base or vault trauma (except for the old maxilla lesion), sawing, or opening of the cerebral cavity was present.

A circumferential band of black pigment was seen on the skin at the base of the neck. Using Raman spectroscopy, it was identified as ivory black, a variety of amorphous carbon. This charcoal, obtained by anaerobic calcination of animal bones, corresponds to that deposited by the surgeon Pigray on the surface of the cadaver to absorb decomposition fluids and putrefactive gases; the precise upper limit of the cervical deposit may be explained by the head being protected by strips of cloth so that it was not blackened during the process.

We found many unidentifiable vegetal deposits in the mouth, which were, among other things, used to mask unpleasant odours that emanated from the oral cavity. Mercury was sometimes used when the skull was left intact. It was usually deposited as cinnabar salts within the nostrils, which were tightly packed with segments of textile. In this case, no trace of mercury was found in samples from the nostrils or the nasal cavity.

Pathological background

Computed tomography also showed partially conserved dura mater and dried brain parenchyma, with no identifiable anomalies. Mumified vascular and nervous structures were seen in both orbital cavities, and the right orbital cavity contained a dense biconvex 7 mm disc. This disc corresponds to the eye lens, the high density (137 Hounsfield units) of which indicates the presence of a cataract. We also identified diffuse and moderate marginal spondylarthrosis in all cervical vertebrae.

Conclusion

Now positively identified according to the most rigorous arguments of any forensic anthropology examination, the French king’s head will be reinterred in the royal basilica of Saint-Denis after a solemn funeral ceremony. Similar methods could be used to identify all the other kings’ and queens’ skeletons lying in the mass grave of the basilica, so that they can be returned to their original tombs.

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Cite this as: BMJ 2010;341:c6805

bmj.com/podcasts
Listen to Philippe Charlier explain the horrible history of Henri IV’s head at bmj.com/podcasts

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Mozart’s 140 causes of death and 27 mental disorders

The plethora of proposed causes of death and mental disorders suggested for Mozart stems from some obscure need to cut great artists down to size, writes Lucien R Karhausen

A recent epidemiological study has reintroduced the hypothesis that Mozart died from a nephritic syndrome caused by a streptococcal epidemic. It rests on the assumption that “according to the eyewitness accounts, the hallmark of Mozart’s final disease was severe edema.” However, the assumption is undocumented. In fact, four of the eyewitnesses reported their observations and none noticed severe oedema: Guldener wrote that he “made a careful inspection of the cadaver and saw nothing unusual.” Sophie Haibel, who attended his last illness, mentioned a swelling of the extremities.

Is this an isolated case? Not at all. This diagnostic inflation springs from the procrustean bed fallacy (selection and manipulation of the evidence), as well as from the build-up of undocumented manifestations, such as severe oedema, dyspnoea, convulsion, hemiplegia, lancinating pain, tender joints, and such like; moreover, the “Mozartium” skull is now known not to be Mozart’s.

I have identified 140 (sometimes overlapping) possible causes of death, in addition to 85 other conditions. But Mozart died only once. Some causes are plausible, only few—maybe one, or maybe none of them—can be true, so most if not all of them are false.

Several dividing lines separate those authors who believe in foul play and those who reject it, between those who cling on to some sort of chronic disease process and those who believe in an acute condition, between those who twist the evidence and those who display a critical respect for the facts, as well as between those who seek some rare condition and those who are satisfied with some commonsensical explanation.

Many authors have favoured the hypothesis of an acute condition such as influenza; staphylococcal, streptococcal, or meningococcal infection; various septicaemias; scarlatina or measles; typhoid or paratyphoid fevers; typhus; tuberculosis; trichinosis; and so on. Postinfectious glomerulonephritis was first proposed by Barraud in 1905. Schoental, an expert in microfungi, thought that Mozart died from mycotoxic poisoning. Drake, a neurosurgeon, proposed a diagnosis of subdural haematoma after a skull fracture identified on a cranium that is not Mozart’s. Ehrlich, a rheumatologist, believed he died from Behçet’s syndrome. Langegger, a psychiatrist, contended that he died from a psychosomatic condition. Little, a transplant surgeon, thought he could have saved Mozart by a liver transplant. Brown, a cardiologist, claimed he succumbed to endocarditis. On the basis of a translation error of Jahn’s biography of Mozart, Rapporport, a pathologist, thought Mozart died of cerebral haemorrhage. Ludewig, a pharmacologist, suggested poisoning or self poisoning by drinking wine adulterated with lead compounds. For some, Mozart manifested cachexia or hyperthyroidism, but for others it was obesity or hypothyroidism. Ludendorff, a psychiatrist, and her apostles, claimed in 1936 that Mozart had been murdered by the Jews, the Freemasons, or the Jesuits, and assassination is not excluded by musicologists like Autexier, Carr, and Taboga. Deutsch, a Mozart musicologist, listed some methodological concerns such as mixing fact and fiction, and the spreading of errors to produce a saleable story. The diagnostic criteria may themselves be adapted to the hypothesis.

In clinical medicine, we try to reach a diagnosis on which every reasonable and informed doctor agrees. But in historical medicine all the facts are in, so that alternative hypotheses cannot be eliminated through further investigation. Some diagnoses, such as rheumatic fever, have been carefully considered. Many others, such as heart or kidney failure, have been aired without proper assessment. Yet others have been arrived at by rigging the evidence through “data torturing,” usually in good faith. The probability of a diagnostic hypothesis decreases as the number of alternative possibilities increases. Preference should be given to the most common ones; the rarer a disease the stronger the evidence needed for its support.

Finally, preference should be given to contemporary rather than retrospective sources and to observational rather than inferential ones. Henoch-Schönlein purpura has been one of the most successful among the groundless hypotheses: myths and legends as well as starting diagnoses have a strong selective advantage over mundane hypotheses in the competition for successful circulation.

The upshot is that the whole exercise becomes vacuous. One author gave us a key to this situation: “Shapiro proposed that Mozart’s fatal illness was due to streptococcal septicemia complicated by acute renal failure. Bär argued in favour of rheumatic fever. Franken diagnosed a toxic carditis and heart failure following staphylococcal, streptococcal or meningococcal sepsis, or toxic scarlet fever. We have argued in favour of Henoch-Schönlein syndrome.” This brings to mind a horse race where gamblers bet on their cherished horse although they know that no horse will win because the race will not be run. Lange-Eichbaum complained early in 1930 that too often pathography becomes a “historical game, a literary feuilleton, or a medical entertainment.” The motto of Mozart’s biography written by Nissen (Constanze Mozart’s second husband) was: de mortuis nil, nisi vere.

What clearly emerges is that Mozart’s medical historiography is made out of various alternatives, with a general time trend as tenable diagnostic hypotheses are progressively exhausted: the more recent they are the less probable. The most likely diagnoses—such as influenza, typhoid fever, and typhus—were proposed first, and only rare and irrelevant conditions such as Goodpasture’s syndrome, Wegener’s granulomatosis, Still’s disease, or Henoch-Schönlein syndrome were left for those who came later.
Even in the absence of new evidence, there is still some future in the business for those who want to attach their name to some new speculative hypothesis. It will always be possible to suggest a new diagnosis, so that a complete tabulation, although denumerable, could be theoretically infinite. Mozart’s death has become a free for all, a grabbing of hypotheses.9

Even so, Nissen held that Mozart’s health was “always delicate like all men of weak constitution.” Ever since, the legend that Mozart was delicate and in poor health has been the accepted view. The contrary view is that Mozart had a strong constitution: he did not have an unusual number of childhood illnesses and he recovered safely from the life threatening ones; neither did he show evidence of any serious chronic disease.10

Most of the 27 psychiatric disorders attributed to Mozart result from disregarding or misquoting the criteria that demarcate normal from abnormal behaviour.11 Some authors upgrade daily worries into paranoid ideas or anxiety neuroses; blues or genuine worries into depression; elation into hypomania; linguistic games into jargonophasia; wit into immature or manic behaviour or into a childish, psychotic other self12; the dissonant harmonies of the Haydn quartets into Tourette’s syndrome13; and, at the end of his life, a small shuddering into a convolution.

Thus, highly selective readings of the sources, blatant misquotations, and perversions of the diagnostic criteria have led to shoddy medical interpretations. Mozart allegedly had thought disorder, delusions, musical dysphasia, and epileptic fits, plus he did not actually compose music but merely displayed musical hallucinations.14 He was a manic depressive,15 a pathological gambler, and had an array of psychiatric conditions such as Capgras’ syndrome, attention deficit/hyperactive disorder, paranoid disorder, obsessional disorder, dependent personality disorder, and passive-aggressive disorder. This has resulted in psychiatric narratives that blend an uninterrupted long tradition of defamation—the film Amadeus was one of the last public expressions of this tradition.

With psychoanalytical stereotypes, the shadows keep lengthening. Being an artist, Mozart was not far removed from being a “psychoneurotic.” Mozart’s music is characterised by its “fevency or lack of sexual provocativeness” and its “feminine polarity.”16 Some have leerily made analogies between Mozart’s musical ornamentation and urinary dribbling,17 between musical creativity and farting,18 between writing music and vomiting,19 or between musical expression and defecation.20 So the final account leaves us with those 19th century speculations that Mozart, like most geniuses, was mentally and physically degenerate: didn’t he show signs of atavism,21 22 such as reptilian23 or cercopithecoid ears24 For all that, some biographers often indulge in the illusion of uncovering Mozart’s hidden mental life while they actually described their own preoccupations and obsessions.

Eliot Slater, a Maudsley hospital psychiatrist, observed about Mozart that critics of today “are fascinated so much by the breaking of conventional restrictions, by the chaotic and disorderly, by the neurotic and the deviant, even by phenomena which are directly evil, that they can find little interest or merit in the products of an energetic and healthy normality.” Did not Mozart himself write: “Talk much—and talk badly, but this last will follow of itself: all eyes and ears will be directed at you.”

Slater added, “If, however, we find [the composer’s] personality strange or difficult to understand, then we may only be able to bear comparison by trying to cut down the man or his work to our own scale. We can do this more easily if, at any point, we are able to look down on him from above, from a superior level of sanity, or social competence or moral integrity.”25

This phenomenon is Mozart’s medical nemesis. It covers the hidden intent to pull an exceptional creator down from his pedestal through some obscure need to cut great artists down to size. It is reminiscent of Rameau’s nephew in Diderot’s novel who says about people of exceptional creativity: “I never heard any single one of them praised without it making me secretly furious. I am full of envy. When I hear some degrading feature about their private life, I listen with pleasure. This brings me closer to them. It makes me bear my mediocrity more easily.”

If there ever was a musician in the whole history of music who was mentally healthy it was beyond the shadow of a doubt Mozart, in the probable company of Joseph Haydn.26

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Competing interests: None declared.

Provenance and peer review: Not commissioned; externally peer reviewed.

The listing of Mozart’s causes of death, mental disorders and other conditions is available from: http://karhausenlmd.blogspot.com.

Mozart’s Requiem, left unfinished at the time of his death from whatever
The season of dietary indulgence seems a good time to celebrate doctors whose names have become linked with items of food and drink. From antiquity to the present, doctors have attempted to influence the diet of their patients. Some have developed foods that became so popular that they have achieved lasting commercial success. Although many are forgotten as doctors, their names remain well known to the public, becoming famous brand names and trademarks.

**Christopher Rawson Penfold (1811-70) and Henry John Lindeman (1811-81)**

Doctors played a major role in the development of the Australian wine industry, and two remain as popular brands today: Penfolds and Lindeman’s.

Christopher Rawson Penfold studied medicine at St Bartholomew’s Hospital, London, graduating in 1838. For six years he practised medicine in Brighton, before emigrating to Australia in 1844 and settling close to Adelaide. He believed in the medicinal power of wine, particularly for the treatment of anaemia, and before he left Britain had obtained vine cuttings from France. In Australia he developed a successful medical practice and began to make wine. Originally this was intended for medicinal use, but demand understandably grew and soon his wine was being sold throughout the country. Although he reduced his clinical work as demands of the vineyards increased, he continued to practise some medicine until the year of his death. After his death, his wife, who had been involved in wine production from the beginning, took over the business. It has now become internationally successful.

Henry John Lindeman graduated from St Bartholomew’s Hospital in 1834 and became a naval surgeon. Dissatisfied with his prospects in the navy, he left in 1840 for Australia, where he started a medical practice. He believed that the Australian climate made wine a healthier drink than spirits, and before leaving Europe had visited French and German vineyards and studied their wine making techniques. In 1843 Lindeman bought land at Cawarra where the soil and climate were suitable for growing vines. He was building up a successful business when a fire destroyed this property and stock of maturing wine. Undeterred, he went to the Australian goldfields, where he worked as both a doctor and miner until he had acquired sufficient funds to rebuild the winery. He expanded throughout Australia and soon had a reputation for producing wines of high quality.

**William Oliver (1695-1764)**

William Oliver was an English physician, philanthropist, and inventor of the Bath Oliver biscuit. He studied medicine at Cambridge and Leiden then practised for a time in Plymouth. In 1725 he moved to Bath, where he spent the rest of his life. He soon built up the largest practice in the city. Oliver had a wide range of interests outside medicine, including literature, art, and architecture. However, he is best remembered today for his invention of the Bath Oliver, a hard savoury biscuit, which he initially used in treatment along with Bath mineral water. He is also said to have invented the Bath Bun, a sweet fruit bun that his patients loved. They ate them to such excess and gained so much weight that he abandoned buns in favour of biscuits.

Although many are forgotten as doctors, their names remain well known to the public, becoming famous brand names and trademarks.
Shortly before his death Oliver gave his biscuit recipe to his coachman, along with £100 and a quantity of flour to set him up in business. The coachman opened a shop and soon made his fortune.

John Abernethy (1764-1831)
The Abernethy biscuit, a hard biscuit originally flavoured with caraway, is named after John Abernethy, an English surgeon who studied and worked for most of his life also at St Bartholomew's Hospital. His robust sense of humour and histrionics made him a popular teacher. Abernethy was renowned for his rudeness to patients no matter what their social status or wealth, which paradoxically only served to increase his practice and income. He believed that disorders of the digestive tract were responsible for all diseases and that frequent purges and a restricted diet were vital in the treatment and prevention of disease. After his death his emphasis on diet led to the naming of the biscuit after him.

Thomas Richard Allinson (1858-1918)
Thomas Allinson was a British doctor who founded a bakery which still produces bread under his name, manufacturing the loaf that claims to have “nowt taken out.” He qualified in Edinburgh in 1879, and practised throughout his life in London. He was a vegetarian who condemned alcohol, coffee, tea, and tobacco, as well as meat, at a time when much of the medical profession was in favour of smoking as being beneficial to the lungs. He believed that the whole wheat grain was the perfect food for man and that bran was important to health, almost a century before the work of Dennis Burkitt convinced the medical profession. His outspoken criticisms of his medical colleagues and widespread self-promotional advertising led to the erasure of his name from the Medical Register in 1892. Despite this he continued to practise successfully, to give public lectures, and to write on his methods of preventing and treating disease.

Joseph Fry (1728–87)
Joseph Fry was an English physician, businessman, and chocolate manufacturer. He served an apprenticeship to an apothecary and settled in Bristol, where he set up an apothecary’s shop and developed a large medical practice. He was a strong believer in the health value of cocoa powder, which in his day made a bitter, definitely medicinal drink. He began to make a chocolate drink in his shop in 1759. Fry was an astute businessman and soon abandoned medicine, except for charitable cases, in favour of various successful business activities. In 1761 he purchased a chocolate business, which was successful, and he was soon selling chocolate throughout the United Kingdom. In 1764 Fry passed control of the chocolate company to his wife and sons, while he concentrated on his other business activities, retiring only in the year of his death. His chocolate company continued to expand and became the largest manufacturer of chocolate in Britain. In 1847 the company was first to develop a technique for producing solid chocolate bars and in 1866 the Fry’s Chocolate Cream bar was invented.

John Harvey Kellogg (1852–1943)
John Harvey Kellogg was an American surgeon, hygienist, and food manufacturer who accidentally invented cornflakes. He graduated in medicine from Bellevue Hospital Medical College in New York City in 1875 and the following year became superintendent of the Battle Creek Sanitarium, Michigan. He practised a brand of holistic medicine advocating a vegetarian diet, abstention from alcohol and tobacco, frequent enemas, and exercise. He believed most diseases could be alleviated by altering the intestinal flora. To this end he used, among other treatments, yoghurt enemas.

In 1884 Kellogg obtained a patent for the manufacture of “flaked cereal.” Looking for a digestible bread substitute for use in the sanatorium he had accidentally left a pot of boiled wheat to stand. This wheat emerged from rolling as large, thin flakes, which, when baked, became crisp. His patients liked the result so much that he formed a company with his brother to manufacture and market corn flakes (although he and his brother later fell out and parted company). Kellogg also invented peanut butter.

Conclusion
Lists of doctors best known for their contribution to fields outside medicine—called medical truants by Lord Moynihan—are dominated by those who have achieved success in areas such as politics, literature, science, exploration, and natural history. It may be thought that commercial success makes doctors undeserving of professional recognition. This article attempts to rescue some from medical oblivion.

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Competing interests: None declared

Provenance and peer review: Not commissioned; not externally peer reviewed.

The teapot and the BMJ: two quintessentially British objects (well perhaps not the teapot, given its Chinese origins, but definitely adopted by the British). Both have helped the nation’s doctors in providing the best possible care for their patients over the past 260 years. The BMJ has provided up to date research, case reports, and articles to its readers, but what about the teapot’s contribution? Some people may think that the teapot serves only one (fairly obvious) purpose, while others view it as completely superfluous. I would like to offer my findings from the BMJ archive, with a view to making teapot sceptics consider whether it really is just “a little teapot.”

Teapots: the short and stout physicians’ friends

Resourceful doctors have put the teapot to many different uses over the years, finds Katharine Cranfield

The teapot first features in the BMJ as a medicinal aid in 1844, when it was used in the management of hydrophobia (late stage rabies). At a meeting of the Sheffield Medical Society, the case was presented of an 18 year old apprentice tiler who was able to drink fluids only through the spout of a teapot with the lid on. An unlidded teapot (or any other vessel) increased the patient’s panic, inducing endless paroxysms of coughing and spluttering and leaving him unable to swallow.

Poisoning
One particularly perceptive physician used a teapot and its contents to understand the cause of death of two of his patients. In 1852 Mr Skevington was called to see a lady and her maid servant, who had both become acutely unwell after drinking a cup of tea made to Mrs Beeton’s instructions. These stated that “few grains of carbonate of soda, added before the boiling water is poured on the tea, assist to draw out the goodness: if the water is very hard.” Unfortunately, some varieties of tea contain arsenic, and the bicarbonate of soda reacted with the tea to produce arsenic acid, delivering both ladies a fatal dose.

Although these findings did not help Mr Skevington to save his patients, they did provide him with an interesting case report to submit for publication. The teapot’s shady reputation as an accomplice in poisoning continues in a case report from 1856, in which a servant girl attempted to poison her mistress by adding arsenic to her teapot. The lady, who had severe rheumatism, noticed an unusual taste and therefore drank only a spoonful of the tea. She had mild symptoms of arsenic poisoning for a week, but her rheumatic pain and joint stiffness settled for many months. This hints at the potential for arsenic based rheumatic treatments, although to date none have been successful because of their toxic side effects.

A slightly more eccentric rheumatic treatment involving a teapot was described in 1904. Black slugs “masked in a teapot with water and salt, supply an oil” that is reportedly excellent for pouring directly on to rheumatic joints. Perhaps we should consider re-evaluating such a treatment. It would certainly solve many gardeners’ slug problems, although I wonder how many patients would be prepared to test such a therapy.

Other teapot “poisoning” cases have also featured in the BMJ. An 1853 article described delirium tremens, probably secondary to excessive tobacco intake. The worst cases were in “sailors who would fill a teapot and smoke through the spout.”

Public health
After cholera was discovered in London in 1854, the teapot aided Professor Franklin in discovering that even boiling water contaminated with “excrement and organic matter” does not prevent sickness and diarrhoea. When two of his patients became acutely unwell after drinking a pot of tea, he tested the well water used to make the drink. Finding it to contain traces of human excrement from a leaking sewer, but no cholera, he ensured that this water source and several others nearby were permanently closed. Mr Smee (physician and chemist turned “man of self-purification”) continued to echo such sentiments in campaigning for ground sewerage for London. In 1869, most of the city’s sewerage ended up in the river Thames, which people used as a source of drinking water and fish. Mr Smee astonished the public with his “somewhat unrefined, but not inappropriate warning” that “the teapots of London are filled from the waterclosets of Oxford.”
Winter holidaymakers should perhaps take heed of an 1880 article suggesting that teapots are the ultimate travel accessory. Following an outbreak of typhoid fever in Switzerland, Sir Henry Thompson suggested that no traveller should be without “a teapot and a filter,” enabling you to “practically abolish some of the danger of impure water.”

**Cup of cheer**

The effects of tea on psychological wellbeing are also well documented. One 1886 article states that “It is known to all English-speaking peoples as ‘the cup that cheers but not inebriates.’” I suspect that all doctors have realised the veracity of this statement 11 hours into a busy on-call session.

The teapot was felt to be vital for dealing with “neuroses in wartime.” When outlining the essential equipment in first aid shelters for manpower, the Mesopotamian Expeditionary Force describes finding one of his medical officers resuscitating a moribund patient by “pouring saline into his veins from his own teapot.” Although no further details are given regarding the logistics or outcome of such an infusion, an article from 1947 may shed some light. It explains that many a “devoted missionary has performed wonders with a teapot, a piece of rubber tubing, a hollow needle and water from a local well,” to fashion a crude giving set.

**Medical aid**

Before the arrival of drinking straws, teapots provided a novel method of feeding patients who had oral surgery. In 1891, Jonathan Hutchinson described a method of fixing a “long, flexible nozzle” on to a teapot spout, and passing this down the back of the patient’s throat to provide nutrition immediately after tongue surgery. Perhaps hospital juniors ought to remember this trick when unable to pass a difficult nasogastric tube.

The sequencing of actions required to make a cup of tea forms a vital part of the assessment of a patient’s cognitive and functional ability, to the extent that a 1988 article suggests “patients are not allowed home from a British geriatric ward until they have proved that they can make a cup of tea.” However, this testing method is not new. James Edmonds used a tea set as part of the routine assessment of a woman with a right sided weakness and expressive dysphasia in 1900. Mr Edmonds would regularly take afternoon tea with his patient, and while he was always capable of using the teapot and milk jug, she was rarely able to name them.

It was in the resource scarce cholera camps of the Middle East that the teapot really came into its own as a life saving piece of equipment. In a letter dated 7 June 1916, Victor Horsely (a surgeon with the Middle East that the teapot really came into its own as a life saving piece of equipment. In a letter dated 7 June 1916, Victor Horsely (a surgeon with the Mesopotamian Expeditionary Force) describes finding one of his medical officers resuscitating a moribund patient by “pouring saline into his veins from his own teapot.” Although no further details are given regarding the logistics or outcome of such an infusion, an article from 1947 may shed some light. It explains that many a “devoted missionary has performed wonders with a teapot, a piece of rubber tubing, a hollow needle and water from a local well,” to fashion a crude giving set.

**In brief**

Who better than a physiotherapist to suggest sensible ways to make life easier for people whose bodies don’t work as efficiently as they once did? Susan Hooker’s Caring for Elderly People: Understanding and Practical Help is now in paperback (Routledge and Kegan Paul, £9.95) and includes much useful advice about arthritis, stroke, fracture, exercise, diet, together with the numerous aids and gadgets that can make life easier. Some are homemade—this teapot poucer, for example—and others may be borrowed from voluntary organisations or the social services, or bought from the listed manufacturers. This invaluable book is full of ideas for the aging and those who care for them.

Dr E Lyth wrote to inform the rest of the medical profession how to stay well when attending to patients with influenza in 1929. He advised filling an atomiser with fresh tea from the morning teapot and using it both hot and cold for the duration of the next 24 hours. Dr Lyth suggested “2 to 3 compressions of the bulb for each nostril and for the throat before going out and on returning, with an extra use of the atomizer before and after seeing a suspicious case.” Infection control teams nationwide may wish to take heed and provide their staff with a traditional, cost effective method of protecting themselves ahead of this year’s flu outbreak.

With such a vast array of contributions to modern day medicine, I hope that at least some sceptics are convinced that it is certainly not just a “little teapot.” Anyone who still believes that it is a superfluous item can always give it away. No fewer than 15 physicians over the years have not only been given such an object as a retirement or thank you gift but had the fact published in the BMJ. Perhaps the next time you pick up an object you feel is defunct in today’s society, you might consider looking it up in the BMJ archives? Who knows, you might be surprised at what you find.

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**Competing interests:** KC has a probable tea addiction and is a teapot fan.

**Provenance and peer review:** Not commissioned; not externally peer reviewed.

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Cite this as: *BMJ* 2010;341:c6738
Acting on evidence

John Powell describes how the BMJ archive was used to raise three ghosts of The London Hospital

The arrogant junkie surgeon, the maverick heart throb, and the pioneering genius: it could be a roll call for the medical department of any teaching hospital. Casualty 1909 was a BBC drama series (14 June–19 July 2009) set in The London Hospital in Edwardian times. The series made extensive use of the BMJ archive to construct convincing medical storylines from the first decade of the twentieth century, and to put flesh on the bones of the principal medical characters, who were based on real doctors of the period.

Henry Percy Dean

In 1909, Henry Percy Dean was a surgeon and teacher of operative surgery at The London Hospital. As his obituary in the BMJ noted, Dean was a brilliant medical student at University College London and became one of the leading figures in the introduction of spinal anaesthesia, authoring a classic paper on the use of stovaine in the BMJ of 1906. The sentiment of this paper was succinctly paraphrased in Dean’s line, as used in the BBC series: “Observe how the possibility of surgical shock previously common in abdominal surgery has been all but eliminated by the use of stovaine anaesthesia via lumbar injection.” Unfortunately Dean’s predilection for tropane alkaloids extended beyond his professional practice and his cocaine addiction became an open secret at The London.

Sir Arthur Keith, responding to the announcement of Dean’s death, gave this revealing portrait of the prominent surgeon: “He had the promise which we who were associated with him at the London Hospital thirty-five years ago perceived, he would have died the leading surgeon of his time... He seemed destined to reap the highest rewards his profession could confer on its most distinguished votaries. What happened? I cannot tell. All I know is that some tragedy in his life robbed modern surgery of a man who, if things had been otherwise, would have left on its progress an enduring memorial.”

In the drama of Casualty 1909, the story of the early days of spinal anaesthesia is interwoven with Dean’s personal struggles. Dean’s professional performance begins to suffer and ultimately one of his ward nurses turns whistleblower. In his own case reports Dean acknowledged the incidence of headache following spinal anaesthesia, a finding replicated in other contemporary case series, and in Casualty 1909 Dean’s patients increasingly complain of this side effect. Dean makes a (fictionalised) mistake in the administration of spinal anaesthesia in one patient, who does not regain movement in his lower limbs, and subsequently misses the diagnosis of a ruptured urethra while operating on a patient with a fractured pelvis and punctured femoral vein. Figure 1 shows the reconstruction of the surgery.

Disappointingly, reference to Poupart’s ligament (the inguinal ligament), which appeared in the initial script, did not make the final draft. Other details from the 1912 BMJ source article were used by the prosthetics department to construct the pelvic model for the procedure: “A longitudinal incision about 4 in long was made over the tumour. On cutting through the integument and deep fascia, dark clots and about a pint of dark fluid blood were turned out.”

Although Dean’s struggle with cocaine would cost him his role as full surgeon at The London, he won a victory in the battle over the introduction of spinal anaesthesia. In a key scene he persuades the house committee of The London to release an unprecedented statement in support of this innovative method. This announcement was noted in the BMJ of 12 June 1909 by hospital surgeon Lawrie McGavin. In fact, the BMJ archive revealed that 1909 was a key year in the regulation of anaesthetic practice and the emergence of the specialty of anaesthetics. As well as reports of the passage of the Anaesthetic Bill and the accompanying debate, in the Christmas 1909 issue of the BMJ, one correspondent, the eminent anaesthetist Sir Frederic Hewitt, again of The London, also drew attention to the dangers of single handedly anaesthetising and operating.

Millais Culpin

Millais Culpin worked in the receiving room of the London Hospital in the early 1900s, and he was later to become a leading figure in psychology. Culpin was one of the first to recognise the benefits of psychological treatment for post-traumatic stress disorder (in people with shell shock from the first world war). Culpin’s early interests in hysteria and so called functional disorders are dramatised through his dealings with the psychological issues affecting many of the patients passing through the receiving room.

One fictionalised case is that of a Mrs Anderson, a woman with depressive symptoms and a fondness for gin who is admitted after ingesting a questionable anti-corpulent preparation. Such “secret remedies” were a widespread phenomenon of the period, as recorded in a series of BMJ articles and a book published by the BMA in 1909. In Casualty 1909, Culpin takes a keen interest in cases of attempted suicide (illegal in England and Wales until 1961) and in one incident deals with a case of caustic soda ingestion. The symptoms and treatment (“gastric lavage and lemon juice”) were recorded in a BMJ case study. In another case, continuing his encounters with the social and legal issues of the time, Culpin completes an abortion in a prostitute who has only partly succeeded in undertaking the procedure herself. The woman has symptoms of lead poisoning, having consumed lead pills as an abortifacient. The archive revealed this was a common practice of the time. Culpin’s work in the receiving room is also useful to demonstrate some now outdated treatments revealed by the archive, for example, the use of strychnine as a “vascular tonic” in heart disease.

All dramas require romance, and in Casualty 1909 this is provided by a nurse Ethel Bennett. One passionate kiss is as far as the relationship between Culpin and Bennett progresses on screen, but from his BMJ obituary we know that, “In 1913 Dr. Culpin married Miss Ethel Maude Bennett, daughter of Mr. E. Dimery Bennett.” The production company were also able to trace the couple’s descendants and read Nurse Bennett’s own diaries from the time. In the series, Ethel’s brother dies following an appendicectomy, an
operation which at the time had “an acknowledged mortality of 3.3 per cent.”

Henry Head

The appositely named Henry Head is a key figure in the history of neurology, in particular for his pioneering work on sensation. In 1909 he was assistant physician at The London Hospital. Head is perhaps best known for his experiment in nerve regeneration when, as Head himself related in the BMJ, he “determined to bring clinical results to an experimental test by dividing the radial and external cutaneous nerves.” Head undertook the procedure on his own arm and the (in)famous scene is re-enacted in Casualty 1909. In the years following this pioneering self-experiment, Head and his renowned colleague W H R Rivers meticulously documented the slow recovery of sensation.

Head’s discursive papers in the BMJ, such as an essay on the nomenclature of disease, reveal something of the philosophical character of this Renaissance man, who was also a published poet and close friend of Siegfried Sassoon. Indeed, he co-authored a letter in the BMJ, affirming that “philosophic studies would be of advantage to many medical men, both by expanding and defining their outlook in relation to general or individual experiences and by affording assistance in the solution of practical difficulties.”

Like Culpin, Head had an early interest in psychology and in the relation between mental states and physical illness. In an address on hysteria, he wrote, “the general physician is scarcely familiar with the psychical aspect of medicine; he and his colleague, the surgeon, rarely consider how large a part the mind plays even in the symptoms of gross structural disease.”

In Casualty 1909, Head’s thoughtful nature and clinical acumen are illustrated in his astute diagnosis of polio in a recent immigrant (unusual in London at that time, although sporadic cases did occur); in his treatment of an unusual case of disseminated sclerosis (multiple sclerosis, treated with strychnine); and in his dealings with a histrionic young actress who has concealed her identity and thrown herself under a horse tram.

Postscript

Henry Percy Dean retired from the active staff of the London Hospital in 1913 at the age of 49, to take up the teaching post of consulting surgeon. He died 16 years later having never fulfilled his early promise. Millais Culpin went on to hold the chair in medical and industrial psychology at the London School of Hygiene and Tropical Medicine and became president of the British Psychological Society. He died in 1952, aged 78. Henry Head continued to practise and teach medicine, and to undertake neurological research, until his retirement in 1925, aged 64, when Parkinson’s disease began to take its toll. He received a knighthood in 1927 and died in 1940.

With the assistance of the BMJ archive, Sir Henry Head and his colleagues were able to walk the wards of The London once again.
“In consequence of enemy action”

Stephen Casper describes the Rockefeller’s programme that led to 84 medical students studying in North America for part of the Second World War.

Introduction

Between 1940 and 1945, the Rockefeller Foundation offered fellowships for British medical students to complete their medical training in North America. These fellowships arose from the damage caused by the extensive aerial bombardment of medical facilities across Britain and shortages of qualified teachers to train students. To the American committee at the Rockefeller Foundation that provided their fellowships, these medical students became another thread in the enlarging fabric of the “special relationship.” To the British committee charged with selecting them, these students represented a last line of defence, a contingent of students able to fight on should Britain be occupied.

What was the Rockefeller scheme?

Documents from both sides of the Atlantic record the programme that emerged, although the story is chiefly captured by papers held in the Rockefeller Archives (but for a pithy discussion, see Hill3). An early memorandum by Robert Lambert (Rockefeller Foundation) and John Fulton (a Yale physiologist) from September 1940 offers a sense of the origins of the programme: “Fulton has in mind a limited group—not more than a hundred. Thinks US and Canadian medical schools would give free tuition. Yale might take 5, Harvard 10, Columbia 10, etc.”

The Rockefeller Foundation subsequently allocated $5000 per student, while articles in medical journals justified the programme as a consequence of enemy action and the beginning of a new era of cooperation between British and American medical schools. In a letter to the BMJ Henry Dale observed that the interchange of medical personnel was the continuation of international collaborations begun by Anglo-American physiologists. By March 1941, a letter between the Rockefeller’s Alan Gregg and Edward Mellanby (secretary of the MRC) reveals that the programme was operational and hailed enthusiastically as a “practicable service with some long-term results almost sure to be satisfactory.”

Satisfactory perhaps, but some saw the programme differently. The students were ostensibly selected on their academic merits and likelihood of graduation. Yet, to cynics the interchange placed sons in safer environments; to pessimists the medical students represented a contingent of physicians for the British forces should Germany occupy the nation. Pragmatists observed that training mattered less than the diplomatic service young, attractive men and women offered the British cause in America. As Desmond Pond, one of the students, recalled, nominees had to be academically qualified and “presentable.” He added, “I know at least one or two eminently suitable people… who… were not chosen because of their known pacifist or left-wing views.”

Who went to America? What did they find?

In total, 75 men and nine women medical students are known to have enrolled in 24 North American medical schools between 1941 and 1944 (see tables 1 and 2). They attended schools in California, Toronto, Montreal, Louisiana, Iowa, North Carolina, and throughout the northeastern United States. (See appendix on bmj.com for details of individual students)

Almost all kept in close contact with the Rockefeller’s Robert Lambert. Lambert, despite sighing to the registrar at Yale that he would be glad “when all these nice British boys and girls are back home,” adopted a paternalistic role, writing towards the end of the programme that “the pleasures [the students] have brought have greatly exceeded the few worries they have occasioned.” Such an attitude probably explains why the students kept in touch with him. Some treated him as a de facto father figure, asking for money, advice on personal and professional matters, and for permission for excursions. Many continued to write to him after they returned home.

Often students regaled Lambert with stories of their arrival in North America. The voyage could be harrowing: some experienced dive-bomber attacks, and one arrived in Montreal in his pyjamas, having been rescued from a lifeboat after his ship was torpedoed. Many students described their first hours in America as profoundly confusing. Others recorded more amusing experiences. David Kerfoot (nicknamed Lend-Lease) reported that two English medical students met him at the train station in Iowa City in July 1944. However, the local police subsequently escorted them to the police station, the two students having borrowed a car and, en route, “backed into another car and removed one of its man-guards, failed to stop at all made matters worse by the fact that neither had a driving license.” Thankfully Kerfoot’s story ended happily, for “when the police discovered that I had just arrived, and (better still) that the boat I had sailed on carried a cargo of Scotch Whisky… they took a lenient view of the situation… Since then the Iowa Police have been very friendly to Iowa City’s English colony.”

Such levity often appeared in conjunction with an almost anthropological curiosity on the diversity of America. Grace Andrews, from Bristol University and at Tulane in New Orleans, described the variety of diseases she encountered in the wards of the local charity hospital and noted: “I shall have to… brush up on my French somehow. We have so many patients here who cannot speak anything else.” William Butterfield, from Oxford and at Johns Hopkins, described to Lambert his experiences in the American South: “for Christmas, I went to South Carolina… I loved the South and had a magnificent time being instructed in ‘hunting’ and the American style of dancing.”

In an article in the Lancet another marvelled at the opportunities for cultural exchange in the New World: “I have heard Toscanini, Heifetz, Rachmaninoff, and Horowitz, and have seen a production of Macbeth that left as little to be desired as any production could; I have driven to Chicago and back and seen… the Mid West without realizing that it was as if I had been from
London to Warsaw in two days; I have acquired an old blue jalopy which rears at a traffic light like a busted suffragette; I have grown fat eating irradiated oats, poly-vitamin chocolate bars and aseptic hot dogs; I have almost essayed to jitterbug but find the cut of English trousers rather a handicap; I have shouted at football games but still can’t fathom why; I have made many friends, both students and faculty, in my own and other universities; I have got engaged to be married. I like America.”

In the same article, another student observed that his peers would have possessed a “rugged, insular ideology...at variance with ‘Americanism’” but that gradually the attitudes transformed, because “The American student is three years older than his British brother and the chances are that he will marry in his junior years. Before coming to medical school he has spent four years in college, ostensibly pursuing premedical science; but from what I can gather this is the wild-oats period for most American boys. By the time he reaches medical school he is an honest citizen again.”

Essentialist commentary became a typical practice. David Kerfoot, who took to driving across America, commented to Robert Lambert that Iowa City struck him as a provincial town populated by nice people. William Butterfield enthused: “What a vast and wonderful city Washington DC is! And yet it has a bureaucratic air, and a less dynamic atmosphere than New York City. I felt that the people were associated with vast filling systems... as opposed to the citizens of New York, who seemed to be associated with money, either the amassing of it or the spending of it.”

Their educational experiences had differences too. “The first problem,” wrote one in the Lancet article, “that confuses the English student already awhirl with Coca-Cola, air-conditioning, and high-balls, is the correlation of American and English educational standards. High school, junior college, university median, pre med”—how do they correspond to our system?” Another student at Chicago noted that the medical curriculum was biased towards the application of science to the practice of medicine. Others commented that American education emphasised theory over practice, while British medical schools preferred a combined approach. American medical teachers also engaged in clinical lectures rather than didactic instruction, and the medical exams tended to test objective knowledge through single word answers, true/false questions, and multiple choice questionnaires. Although the students often described the British system as better, they seem to have admired the tenacity and specialisation demanded by the American system.

After their return

Of the 84 students, two did not survive. One died from tuberculosis; the other committed suicide. There is much more research to be done on the subsequent careers of the remaining students, although piecing them together is a painstaking process. We know, for instance, that most trained in America for two years and that three proved unsuccessful academically. Many letters, moreover, indicated that the students felt homesick and were eager to return. It is also clear that most of the returning students were mobilised on their return and thus had not “escaped” to America to avoid military service.

For many, their American experiences also transformed their views of British medical culture. Many found their transition home difficult. Ewan Cadman wrote to Robert Lambert that the emphasis on science was not helpful for the British exams: “I think that if one is not careful one forgets that one ultimately has to sit exams and practice in a country in which the scientific aspects are not as advanced as in the US.”

Michael Newton described another difficulty the British students encountered upon return: “There was I think a slight prejudice among the teaching staff against the intrusion of American idioms and practice: this also occurred to many other Rockefeller students in other London hospitals as I heard afterwards. The change, too, from intern to student was itself considerable. The English hospital equipment I found to be different in many small and perplexing ways—and so
it seemed to me—woefully deficient in certain things.” Perhaps such observations account for the number who eventually emigrated: of the 84 students, 18 eventually settled outside of Britain.

Some had also become romantically involved with Americans. William Butterfield quipped to Robert Lambert that the Rockefeller Foundation could have “stupendous profits as a matrimonial agency. This should help those elusive ‘Anglo-American Relations’.”

Butterfield’s jest, however, played upon a broader pattern in Lambert’s correspondence. Lambert joked, for instance, in a letter congratulating Joan Gannon on her engagement that: “We expected a few ‘casualties’. It looks now as though the number, referable largely to marriages on this side, would be somewhat larger that we contemplated. We had not figured on the Committee sending over a group of such attractive young women.”

**Background**

New Zealanders are passionate about rugby and no professional group is an exception. The medical community in New Zealand has a proud tradition of many individuals playing international rugby and then going on to succeed in their medical career. In anticipation of the impending rugby World Cup, and as a point of historical interest, we conducted a search of medically qualified New Zealanders who played rugby at university, provincial or national level to identify a first 15 as well as reserve players.

**Methods**

No database recording players’ occupations is currently maintained, so a systematic search was not possible. We undertook the search with the help of the New Zealand Rugby Museum, the *New Zealand Rugby Almanak*, representatives from all the provincial rugby unions, and conversations with the knowledgeable individuals acknowledged below.

The criteria for selection required that a player must be a medically qualified professional and eligible to play for the New Zealand national team, the All Blacks. Once identified as eligible, players were selected for the team on the basis of their playing abilities and not for their off-field exploits. All Blacks were given preference for each position if more than one candidate was eligible.

**Results**

We identified over 150 potential candidates, the majority of whom had represented their university. Twenty eligible candidates had played for either the All Blacks or the New Zealand Maori team (see box). The first 15 are listed here.

**Prop**

Mark Irwin (All Black, born 1935) played for Otago in the 1950s and trialled for the All Blacks as a prop at age 18. He later made his debut for the All Blacks as a 20 year old medical student in Wellington, against an Australian side led by Dr John Solomon. He was named as one of five promising players in the *New Zealand Rugby Almanak* in 1954. His representative career was spread over 10 years between 1953 and 1962, but he did not manage to reach 100 games owing to injuries and his decision to concentrate on his medical career. He was an excellent all round athlete and also represented New Zealand at rowing. He worked as a general practitioner and anaesthetist in Rotorua and retired from clinical practice in 2006.

**Lock**

Ian Prior (1923-2009) played in either the lock or loose-forward positions for Otago from 1941 to 1946. He played a total of 35 games over his career. After graduation from medical school, he had a distinguished career as the local general practitioner in Kaikoura for over 40 years.

**Hooker**

Nicholas Mantell (born 1967) played for Auckland, Waikato, New Zealand Universities, and the Northern Maori team in the early 1990s. He was part of the Ranfurly Shield winning Waikato team in 1997 and currently practises as an ophthalmologist in Auckland.

**Prop**

Geoffrey Gordon (1923-2002) played mostly as a hooker for Otago University, Canterbury University, New Zealand Universities, Canterbury, and Otago between 1942 and 1946. He played a total of 35 games over his career. After graduation from medical school, he had a distinguished career as the local general practitioner in Kaikoura for over 40 years.

**Lock**

Lawrence Knight (All Black, born 1949) played for Auckland and Poverty Bay provincially. He played a total of 35 games for the All Blacks including six test matches. His father (Lawrence Knight Senior) and uncle (Arthur Knight) were both All Blacks; unfortunately, his father died just before Lawrence’s selection for the team. His crowning on field moment was scoring the game winning try against the British Lions at the 1971 series. After graduating from medical school, he worked as a general practitioner in London before settling in Pukekohe, where he was elected the local mayor twice.

**Full version and references are on bmj.com**

Cite this as: BMJ 2010;341: c7041
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The first XV: New Zealand doctors and rugby

The medical community in New Zealand has a proud tradition of many individuals playing international rugby and then going on to succeed in their medical career. In anticipation of the impending rugby World Cup, and as a point of historical interest, we conducted a search of medically qualified New Zealanders who played rugby at university, provincial or national level to identify a first 15 as well as reserve players.

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Eden Park, a match won 10-9 by the All Blacks. Records indicate that he was the unofficial medical adviser on his All Blacks tours. He moved to France after the 1977 season and later played for Paris University. He practised in Johannesburg and returned to live in Auckland in the late 1990s.

Flanker
David Dickson (All Black, 1900-78) played for both Otago and Canterbury and later played for the All Blacks in 1925. Although he played a total of seven tour games, he did not play a single test match for the All Blacks. He was also a rugby referee during the 1930s and practised as a surgeon in Christchurch.

Number 8
Hugh Burry (All Black, born 1930) played for Otago, Canterbury, and New Zealand Universities. He also played 11 games for the All Blacks but did not play a test match. Along with Kel Tremain and John Graham, he was a part of the highly effective forward combination, and he was an integral part of the Canterbury team that beat the All Blacks in 1957 and the Lions in 1959. He made his debut for the All Blacks at age 29 but his international career was hampered by a recurring groin injury. He has had a distinguished medical career; he was involved in sports medicine from its inception and later practised as a professor of rheumatology in both Australia and New Zealand.

Flanker
Desmond Oliver (All Black, 1930-97) played for Otago and Wellington and took part in 20 games for the All Blacks, including two test matches. He only played for the All Blacks from 1953 to 1954 and afterwards retired from top level rugby at age 23, probably because his rugby career coincided with his rise in the medical profession. He is recognised as a pre-eminent researcher in renal medicine and is credited with many discoveries related to modern day renal transplantation.

Half-back
David Kirk (All Black, born 1961) played rugby for both Auckland and Otago and played 34 games for the All Blacks, including 17 test matches and 11 as captain. He is recognised as the World Cup winning captain of the 1987 All Blacks but was only made captain as a result of injuries to Andy Dalton and Jock Hobbs. After the World Cup victory, he also led the All Blacks to a Bledisloe Cup win. He retired from rugby at age 25 to accept a Rhodes scholarship. He had a brief clinical career and subsequently took up various senior management positions, including acting as the chief executive of Fairfax media.

First five-eighth
William Fea (All Black, 1898-1988) played rugby for Otago, South Island, and the New Zealand Service team after the first world war. His sole test match for the All Blacks was a scoreless draw against South Africa at age 22, and he retired after 1923 to concentrate on his medical career. He also served as a lieutenant-colonel with the 8th Field ambulance in the second world war. He was the youngest member of the New Zealand army team.

Left wing
Graham Moore (All Black, 1923-91) played for Hawke’s Bay and Otago. He was part of the Ranfurly Shield holding side from 1947 to 1950. He also played a sole test match for the All Blacks in 1949. He was initially chosen as the fullback but was later shifted to the wing after Jack McLean was injured. He was a graduate of Otago University and practised in Masterton.

Second five-eighth—captain
Ron Elvidge (All Black, born 1923) was chosen as the captain of this team. He played for Otago and participated in nine test matches for the All Blacks including five as captain. Elvidge was recognised as one of the leading backs in the post second world war era and was also part of the Ranfurly Shield-holding Otago sides of 1946-48. In 1950 he sustained sternal and rib fractures and a head laceration during a match against the British Lions, but despite being in great pain he returned to the field, because injuries had already reduced the All Blacks to 14 players. He went on to score the only try of the match as the All Blacks won 6-3. He later went on to become one of the most established obstetricians in the country.

Centre
Jeremy Stanley (All Black, born 1975) played for Auckland in provincial rugby and for Auckland and Otago in Super Rugby. He also played three tour games for the All Blacks in 1997 but was unable to cement a regular position in the test team. His career was cut short by a serious spinal injury while playing for Auckland in 2001. He is currently training to be an orthopaedic surgeon.

Right wing
Russell Watt (All Black, born 1935) made his All Black debut in 1957 and played 42 games including nine test matches. Although he only scored three test points, he scored 28 tries in the tour games. His 17 tries in the season of 1957 equalled the previous record set by Albert Asher in 1903. He was recently presented with his All Black cap in Wellington in 2009 during a special ceremony to honour past All Blacks.

Fullback
William Anthony Davies (All Black, 1939-2008) played for Auckland, Otago, and New Zealand Universities from 1958 to 1967. He also played three test matches and 14 tour games for the All Blacks from 1960 to 1962. He was regarded as one of the best utility backs of his era and also played as a second five-eighth. He was renowned for his inventive style of play and attacking prowess.

Reserves
Don Macpherson (All Black, 1882-1956) played for Otago between 1905 and 1907 and played one test match for the All Blacks against Australia in Dunedin. He later played for Scotland while furthering his medical studies in London. He was renowned for his speed and ability to score tries by the corner post.

Peter Tapsell (born 1930) played for Otago and New Zealand Universities and was the vice captain of the New Zealand Maori team in 1954. He qualified as an orthopaedic surgeon and worked in Rotorua. He also had a successful career in politics, including acting as the first Maori speaker of the house from 1993 to 1996.

Robert Sinclair (All Black, 1896-1932) played for Otago and Taranaki and took part in two tour games for the All Blacks in 1923 while he was still a medical student. His accurate goal kicking made the difference in the match between New Zealand and New South Wales in 1923. He was a general practitioner in Hawera before his untimely death.
Arnold Perry (All Black, 1899-1977) played for Otago and New Zealand Universities and in one tour game for the All Blacks. He formed a potent combination with Robert Sinclair and William Fea in the Otago team. After his career as a player, he provided many years of distinguished service as an administrator to the Otago Rugby Union.

Donald Stevenson (All Black, 1903-62) played for Otago and played four games for the All Blacks from 1926-1930. He was known to be adept as both a fullback and a centre, performing well in the tour games for the All Blacks. However, on the eve of a potential debut test match, he fell ill and was not selected.

Kevin O’Connor (1922-2002) played for Otago, South Island, and New Zealand Universities and for the Harlequins alongside Ron Elvidge. He was a general practitioner and police surgeon until his retirement and was also a chief propagator in the establishment of the International Association of Forensic Surgeons.

Nitama Paewai (1920-1990) played for Otago and New Zealand Universities and in the team that played against the British Lions 1950 tour of Australia and New Zealand. He was Karl Mullen, a consultant gynaecologist.

The selection of the captain is also likely to provoke debate. Our chief contenders in this team were Ron Elvidge and David Kirk and though it was difficult to pass over a World Cup winning captain, Ron Elvidge was selected on the basis of his on the field exploits and the various anecdotes shared about his leadership qualities.

An obvious feature of this team is the lack of contemporary players, with the exception of David Kirk and Jeremy Stanley. Certainly, the transformation of rugby as a professional occupation rather than the national pastime has allowed rugby to be a viable career choice for able individuals. As a result, talented medical students may be unable to fully pursue rugby with the time and commitment required. The frequent assessment in medical education might also prevent potential players from playing international rugby. Postgraduate training also requires a substantial commitment of time; many of the individuals noted here were forced to prematurely quit top level rugby to pursue their medical career.

The changing demographics of medical students might also have influenced the selected team. In the past decade, medical students in New Zealand have been from cosmopolitan backgrounds with a historically poor rugby pedigree and, thus, the number of individuals who could meet the criteria of playing top level rugby and being medically qualified might have been lower overall.

We have created a team of the best New Zealand rugby players who were also medical professionals. Similar projects from other countries and in other fields would provide recognition for our multitalented colleagues and would also preserve the rich history of the contributions of the medical community to fields other than clinical and academic practice.

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We thank Hugh Tohill, John Graham, Peter Sinclair (Otago Rugby Football Union), Ron Palenski, Clive Akers (editor of the New Zealand Rugby Almanak), John Heslop, Barbara Heslop, and the New Zealand Rugby Museum. All authors have contributed equally to this work as attested to by the senior author. SS is a recipient of the Auckland Medical Research Foundation Ruth Spencer Medical Research Fellowship.

Competing interests: None declared

Provenance and peer review: Not commissioned, not externally peer reviewed


Cite this as: BMJ 2010;341:c5127

bmj.com archive

Christmas 2008: Rugby (the religion of Wales) and its influence on the Catholic church: should Pope Benedict XVI be worried? (BMJ 2008;337:a2768)

Challenge: We’re looking for fantasy medical First XVs from other rugby playing nations. For example, the captain of the British and Irish Lions 1950 tour of Australia and New Zealand was Karl Mullen, a consultant gynaecologist. The honorary archivist of the Irish Rugby Football Union has located over 190 Irish internationals who were doctors, including the team that played against Scotland in 1920 when there were 11 doctors and medical students in the side.