

## **‘No Sex (Glands) Please, We’re British’: The Response to the 1920s Rejuvenation Craze**

Dominic Hodgson

Department of History, University of Winchester, Sparkford Road, Winchester  
SO22 4NR, UK. Email: [d.hodgson.11@winchester.ac.uk](mailto:d.hodgson.11@winchester.ac.uk)

### **Abstract**

The 1920s can be called the ‘decade of the testicle’ since, within the frenzied era of the new science of endocrinology, testosterone was yet to be discovered. At this time, seemingly bizarre operations, which included testicular transplants from monkeys, were performed to try to restore masculinity in ageing men. The reaction in Britain, however, was more muted than in Europe and North America, reflecting conservative views on sex and the influence of disparate opponents.

Compared to an estimated 750 surgeons in the USA, Norman Haire (1892-1952), Ivor Back (1871-1951) and Kenneth Walker (1882-1966) were seemingly the only three carrying out these surgical procedures in Britain. Of these, Back had the closest relationship with Serge Voronoff (1866-1951), the controversial monkey-gland enthusiast, and had visited him in Paris. Haire, whose patients included WB Yeats (1865-1939), was a sexologist who used his income from performing the (Eugen) Steinach (1861-1944) procedure (ligation of the vas deferens) to fund his lavish lifestyle. Walker's recipients of human testicles included younger men who had lost gonads in the First World War. Of the three British surgeons, Walker appears to have taken the most objective view, not least in his 1924 Hunterian Lecture on the subject.

The relatively low levels of enthusiasm for rejuvenation, it was suggested at the time, mirrored alternative approaches to sex and ageing between the British and other nationals. Rejuvenation ‘mania’, then, in Britain failed to reach the levels seen abroad, despite the colourful nature of the surgeons involved and broad popular interest. This reticence, whilst sparing men unnecessary procedures, highlights contrasting attitudes which, perhaps, persist today.

### **Keywords**

Ivor Back, Norman Haire, Serge Voronoff, Eugen Steinach, Kenneth Walker, Rejuvenation, Monkey glands

## Introduction

The rejuvenation craze of the 1920s and 1930s has been, and continues to be, widely analysed, not least because of parallels with evolving attitudes to gender, ageing and sexuality.<sup>1 2</sup> Britain appears to have been less enthusiastic than the United States and parts of mainland Europe, and there are only three surgeons known to have performed rejuvenating operations in the UK: Ivor Back (1879-1951), Norman Haire (1892-1952) and Kenneth Walker (1882-1966), of whom the latter two wrote extensively on the subject.<sup>3 4 5</sup> Such reticence may have reflected a more reserved attitude to matters of sexuality more generally, and also opposition from a coalition of disparate groups.<sup>6</sup>

## The 'science' behind rejuvenation

Scottish surgeon John Hunter (1728-93) is recorded as having made the first attempt at animal gonadal grafting, placing the testis of a cockerel into 'the belly of a hen'.<sup>7</sup> This work inspired the German physiologist Arnold Berthold (1803-61) who, in 1849, published a report of castration experiments on six cockerels, three of which had their testicles implanted elsewhere in their bodies.<sup>8</sup> The importance of the finding of persistence of male characteristics in this group of birds, suggesting a blood-borne as opposed to nervous stimulant, is thought to have been essential for the conceptualisation of hormones.<sup>9</sup>

In 1889, the physiologist Charles-Édouard Brown-Séquard (1817-94) described startling self-experimentation which is considered 'to mark the inauguration of modern endocrine science'.<sup>10</sup> However, as was also the case with Berthold, the initial reaction to Brown-Séquard's claims was far from enthusiastic, and his public humiliation was only heightened by the very high regard in which he had previously been held. His announcement, to the startled audience at the Société de Biologie in Paris, that he had been self-injecting prepared extract of animal testes, and declaration that as a result: 'everything that I had been unable to do or had done badly for several years on account

---

<sup>1</sup> Alexander K, Honeck M, Richter I. Mapping Modern Rejuvenation: An Introduction. *Journal of Social History*. 2020; 53(4): 875-888.

<sup>2</sup> Amin K. Glands, Eugenics, and Rejuvenation in *Man into Woman: A Biopolitical Genealogy of Transsexuality*. *Transgender Studies Quarterly*. 2018; 5(4): 589-605.

<sup>3</sup> Walker K. Hunterian Lecture on Testicular Grafts. *Lancet*. 1924; 203(5242): 319-326.

<sup>4</sup> Wyndham D. *Norman Haire and the Study of Sex*. Sydney: Sydney University Press; 2012.

<sup>5</sup> Anon. International Congress of Surgery. *British Medical Journal*. 1923; 2: 124.

<sup>6</sup> Williams L. Testicular Grafts. *British Medical Journal*. 1923; 1: 130.

<sup>7</sup> Sengoopta C. *The Most Secret Quintessence of Life*. Chicago and London: University of Chicago Press; 2006. p.30.

<sup>8</sup> Sengoopta. *The Most Secret Quintessence*, 2006 (Note 7). p.34.

<sup>9</sup> Sengoopta. *The Most Secret Quintessence*, 2006 (Note 7). p.35.

<sup>10</sup> Sengoopta. *The Most Secret Quintessence*, 2006 (Note 7). p.4.

of advanced age I am today able to perform most admirably',<sup>11</sup> would see him lampooned in the medical and lay press.<sup>12</sup>

In time, however, the medical landscape would be altered permanently as a result of his actions, since his impeccable academic standing, his provision of extracts *gratis* from his laboratory to other investigators, and his call for the scientific method to be applied to matters glandular accelerated the development of the novel discipline of endocrinology, such that his reputation would eventually be rehabilitated; hence, from Kenneth Walker in 1952: 'Although none of his contemporaries would accept his views, and made great fun of them, a later generation of biologists was less sceptical'.<sup>13 14</sup> This later generation included the two dominant proponents of rejuvenation operations: the Paris-based Russian surgeon Serge Voronoff (1866-1951), who favoured testicular transplantation, and the Austrian physiologist Eugen Steinach (1861-1944), after whom a procedure to ligate the vas deferens was named.



Figure 1. Dr. S. Voronoff. Date unknown. Library of Congress, Prints and Photographs Division, Washington, DC 20540, USA. No known copyright restrictions. <https://loc.gov/pictures/resource/ggbain.37126/>

<sup>11</sup> Hamilton D. *The Monkey Gland Affair*. London: Chatto & Windus Ltd; 1986. p.12.

<sup>12</sup> Aminoff MJ. The Life and Legacy of Brown-Séquard. *Brain*. 2017; 140(5): 1525-32.

<sup>13</sup> Aminoff. The Life and Legacy of Brown-Séquard, 2017 (Note 12).

<sup>14</sup> Walker K. *A Commentary on Age*. London: Jonathan Cape; 1952. p.58.

Voronoff (Figure 1) initially performed allografts using human testes but, due to the poor availability of donor organs, progressed to xenografting large slices of monkey testis into the scrotum of a recipient. At the height of his reputation, and backed by the French government, he also researched such techniques on livestock in Algeria to develop 'super' sheep and cattle.<sup>15</sup> Voronoff was not the first, the most prolific, or the most scientific of the gland-grafters, but the most visible, and, if the hype around these operations had been justified, he would undoubtedly have been lauded as one of the most significant figures in the history of medicine. His eventual fall from grace was thus all the more profound, but in the 1920s he was the international superstar of the rejuvenation movement as his profiling in a 1923 edition of *Time Magazine* attests.<sup>16</sup> George Rimbaud, who translated Voronoff's work into English, wrote, in his introduction to 1927's *The Conquest of Life*, that Voronoff '... has always tried to avoid publicity. But the nature of the savant's discovery was such that it could not well be kept within the confines of the scientific world'.<sup>17</sup>

This portrait of an introverted genius is not shared by others; for example, Patrick McGrady, in 1968's *The Youth Doctors*, in direct contrast, highlighted his 'weakness for publicity'.<sup>18</sup> Indeed, the opinion of Voronoff amongst the public was persistently higher than that of his peers, as illustrated by his struggle to get his work published in medical journals.<sup>19</sup> Voronoff would explain that this was a consequence of jealousy amongst his contemporaries, but, of course, by collating his results in his own books, his outlandish claims for the success of his operations could go unchecked, and his scientific method unscrutinised, before publication.<sup>20</sup> Thus, from Kenneth Walker: 'Voronoff's statements were often very unreliable and he lacked that scientific exactitude and detachment we expect of a scientific researcher'.<sup>21</sup>

As Voronoff's fame grew, so too did the clamour for definitive data, as opposed to selected case histories and testimonials.<sup>22</sup> His decision to present his results in this way would eventually be his undoing, since animals, unlike humans, cannot self-report on the outcome of intervention, and therefore objective measurement for Voronoff's claims of the benefits of grafting in livestock was mandatory.<sup>23</sup> Further, towards the end of his life, he confided in a colleague that he had inadvertently infected many of his monkey gland recipients with syphilis from the donor tissue.<sup>24</sup>

---

<sup>15</sup> Hamilton. *The Monkey Gland Affair*, 1986 (Note 11). p.128.

<sup>16</sup> Anon. Voronoff and Steinach. *Time Magazine*. 30 Jul 1923. p.19-20.

<sup>17</sup> Voronoff S. *The Conquest of Life*. New York: Brentano's; 1928. p.9.

<sup>18</sup> McGrady Jr PJ. *The Youth Doctors*. New York: Coward-McCann Inc; 1968. p.144.

<sup>19</sup> Nanninga J. *The Gland Illusion: Early Attempts at Rejuvenation through Male Hormone Therapy*. North Carolina: McFarland; 2017. p.77.

<sup>20</sup> Hamilton. *The Monkey Gland Affair*; 1986 (Note 11). p.53.

<sup>21</sup> Walker. *A Commentary on Age*, 1952 (Note 14). p.59.

<sup>22</sup> Stark J. *The Cult of Youth: Anti-ageing in Modern Britain*. Cambridge: Cambridge University Press; 2020. p.32.

<sup>23</sup> Hamilton. *The Monkey Gland Affair*, 1986 (Note 11). p.122.

<sup>24</sup> McGrady Jr. *The Youth Doctors*, 1968 (Note 18). p.58.

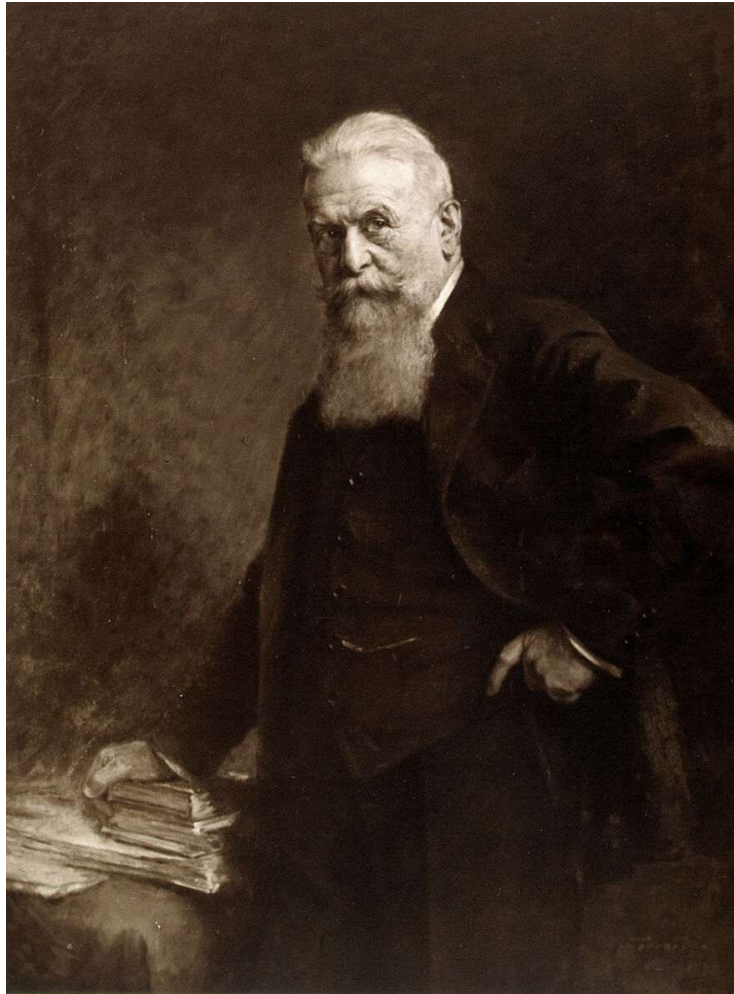


Figure 2. Eugen Steinach. Photograph by J. Scherb after a painting. Date unknown. Wellcome Collection, London. Reference: 13622i. Public Domain Mark. <https://wellcomecollection.org/works/ad23epjb>

Steinach (Figure 2) was a highly regarded physiologist who was nominated nine times for a Nobel prize between 1920 and 1938.<sup>25</sup> His interest in rejuvenation began at The German University in Prague where he experimented on frogs and rats to show how impulses from the testes could affect the brain and, therefore, sexual behaviour.<sup>26</sup> In 1912, Steinach moved back to Vienna to work in association with the urologist Robert Lichtenstern (1874-1952).<sup>27</sup> From his research there, he concluded that hormone-producing interstitial cells proliferated, and germinal cells degenerated, following ligation of the vas, and that there was a reversal of senility in ageing rats who underwent such a procedure. The dawning of the 1920s, the 'decade of the testicle', began with Lichtenstern, at Steinach's request, reporting the beneficial effects of vasoligation on

---

<sup>25</sup> Hansson N, Krischel M, Södersten P, Moll FH, Fangerau H. "He Gave Us the Cornerstone of Sexual Medicine": A Nobel Plan but No Nobel Prize for Eugen Steinach. *Urologia Internationalis*. 2020; 104(7-8): 501-509.

<sup>26</sup> Sengoopta. *The Most Secret Quintessence*, 2006 (Note 7). p.57.

<sup>27</sup> Sengoopta. *The Most Secret Quintessence*, 2006 (Note 7). p.57.

human subjects.<sup>28 29</sup> News of this 'spread like wildfire', not least in the USA, where a film demonstrating the 'Steinach procedure' was shown with the endorsement of the Austrian Government.<sup>30 31</sup> Such attention led to Steinach being featured alongside Voronoff in the aforementioned 1923 *Time Magazine* piece.<sup>32</sup>

Interestingly, Steinach was unhappy with the term 'rejuvenation' as he felt the name detracted from the wider, restorative impact of his procedure, and focused instead solely on the sexual aspect.<sup>33</sup> Steinach had also transplanted gonads from male to female animals and vice versa, and described the 'feminisation' of the castrated males and 'masculinisation' of the spayed females, thus reinforcing increasingly archaic notions on the polarity of the sexes at odds with emerging views, held, not least, by his fellow countryman Sigmund Freud (1856-1939).<sup>34</sup> That Steinach would only waver from this position late in his career contributed to the waning of his professional standing, as did his insistence that he had found female hormone-producing 'F-cells' in the testicles only of homosexuals, which 'proved' a biological basis for such orientation.<sup>35</sup>

### **Voronoff's visits to Britain**

Voronoff visited Britain several times, perhaps most significantly to attend the Sixth International Surgical Conference at the Royal Society of Medicine (RSM) in London, in July 1923, where he discussed his results from gland grafting.<sup>36</sup> His attendance was covered widely in the medical and non-medical press.<sup>37 38 39</sup> Voronoff returned to England on at least one further occasion, to seemingly great fanfare, but also opposition, in 1928. He would lunch with the Duke of Westminster (1879-1953), and allegedly rejuvenate his ailing Scottish terrier, and dine with the playwright George Bernard Shaw (1856-1950) and the Home Secretary Sir William Joynson-Hicks (1865-1932).<sup>40</sup>

However, Voronoff's visit caused alarm amongst a disparate coalition of groups: anti-vivisectionists, backed by parliamentarians, whose concern was for the welfare of the monkeys; eugenicists who warned of the proliferation of a new race through animal

---

<sup>28</sup> Sengoopta C. Transforming the Testicle: Science, Medicine and Masculinity, 1800-1950. *Medicina nei secoli*. 2001; 13(3): 637-655.

<sup>29</sup> Lichtenstern R. Die Erfolge der Alterskekämpfung beim Manne nach Steinach. *Berliner klinische Wochenschrift*. 1920; 57: 989-995.

<sup>30</sup> Sengoopta. *The Most Secret Quintessence*, 2006 (Note 7). p.84.

<sup>31</sup> Hamilton. *The Monkey Gland Affair*, 1986 (Note 11). p.46.

<sup>32</sup> Anon. Voronoff and Steinach, 1923 (Note 16).

<sup>33</sup> Sengoopta. *The Most Secret Quintessence*, 2006 (Note 7). p.114.

<sup>34</sup> Sengoopta. *The Most Secret Quintessence*, 2006 (Note 7). p.63.

<sup>35</sup> Sengoopta. *The Most Secret Quintessence*, 2006 (Note 7). p.139 & 82.

<sup>36</sup> Anon. International Congress of Surgery, 1923 (Note 5).

<sup>37</sup> Anon. International Congress of Surgery, 1923 (Note 5).

<sup>38</sup> Anon. Congress of the International Surgical Society in London. *Boston Medical and Surgical Journal*. 1923; 189: 321-328.

<sup>39</sup> Anon. Voronoff and Steinach, 1923 (Note 16).

<sup>40</sup> Hamilton. *The Monkey Gland Affair*, 1986 (Note 11). p.113-117.

grafting; and horse breeders, who also feared genetic contamination of stock.<sup>41 42</sup> Commentators on both sides of the Atlantic warned of the consequences for young men who would now have to compete for the affection of women of their generation with smooth-talking, experienced and freshly revitalised seniors.<sup>43</sup> Such protestation seemingly only heightened the belief that there must be significant benefit from Voronoff's operations since none of those raising concerns appeared to question their effectiveness.<sup>44</sup>

This opposition, and a lack of enthusiasm more broadly, is reflected in the fact that Britain had only a handful of surgeons performing rejuvenation procedures compared to an estimated 750 in the USA in 1924.<sup>45</sup> However, there still appears to have been interest amongst those who could afford to pay for intervention, with Kenneth Walker suggesting that Voronoff returned at least one more time:

Rumour has it that on the eve of his marriage an elderly British millionaire summoned the Paris expert to London. The great man, accompanied by a chimpanzee, arrived at one of London's smartest hotels, where he was greeted by the bride and bridegroom, and later by two distinguished English physicians. After a preliminary conference the operation was performed. As is, perhaps, only natural, the results were not made public.<sup>46</sup>

### **The three British rejuvenators**

Ivor Back (Figure 3) came from an aristocratic family and was proud to be related to the Duke of Wellington.<sup>47</sup> Back worked at St George's Hospital, London and was an active member of the RSM. He was not a prolific medical author but did co-edit a surgical textbook for junior doctors in 1921.<sup>48</sup> He is said to have been a connoisseur of art and literature and achieved sufficient prominence to have his portrait painted by Sir William Orpen (1878-1931) and Percy Wyndham Lewis (1882-1957); the former portrays Back in his surgical garb and hangs at the Savile Club where Back had been chairman.<sup>49 50 51</sup>

---

<sup>41</sup> Stark. *The Cult of Youth*, 2020 (Note 22). p.50.

<sup>42</sup> Hamilton. *The Monkey Gland Affair*, 1986 (Note 11). p.115 & 117.

<sup>43</sup> Sengoopta. *The Most Secret Quintessence*, 2006 (Note 7). p.104.

<sup>44</sup> Hamilton. *The Monkey Gland Affair*, 1986 (Note 11). p.112.

<sup>45</sup> McClaren A. *Impotence: A Cultural History*. Chicago: The University of Chicago Press; 2007. p.187.

<sup>46</sup> Walker K. *The Circle of Life: A Search for an Attitude to Pain, Disease, Old Age and Death*. Maryland: McGrath Publishing Company; 1942. p.69.

<sup>47</sup> Royal College of Surgeons of England. Back, Ivor Gordon (1879–1951). [https://livesonline.rcseng.ac.uk/client/en\\_GB/lives/search/detailnonmodal/ent:\\$002f\\$002fSD\\_ASSET\\$002f0\\$002fSD\\_ASSET:375972/one?qu=%22rcs%3A%2BE003789%22&rt=false%7C%7C%7CIDENTIFIER%7C%7C%7CResource%2BIdentifier](https://livesonline.rcseng.ac.uk/client/en_GB/lives/search/detailnonmodal/ent:$002f$002fSD_ASSET$002f0$002fSD_ASSET:375972/one?qu=%22rcs%3A%2BE003789%22&rt=false%7C%7C%7CIDENTIFIER%7C%7C%7CResource%2BIdentifier) (accessed 20 July 2025).

<sup>48</sup> Back I, Tudor Edwards A. *Surgery*. London: Churchill; 1921.

<sup>49</sup> Anon. Obituary. *British Medical Journal*. 1951; 1: 1453.

<sup>50</sup> Edwards P. A Gift to the Courtauld: Wyndham Lewis's Ivor Back. *The Journal of Wyndham Lewis Studies*. 2013; 159(4): 1-2.

<sup>51</sup> Royal College of Surgeons of England. Back, Ivor Gordon (Note 47).



Back served in France during the First World War, and later worked in Paris alongside Voronoff, for whom he was a vociferous ally, speaking in support of his gland grafting at the 1923 International Surgical Congress and contributing cases that were presented by Voronoff's assistants to the Congress of French Surgeons in Paris in the same year.<sup>52 53</sup> Back's involvement with rejuvenation, though, appears to have been short-lived as no more was written of his contributions after the mid-1920s. He would go on to be President of the Medical Defence Union, which was noted in his obituaries; the matter of him seemingly being Britain's only recorded monkey-gland grafter, however, was not.<sup>54 55 56</sup>



Figure 3. Portrait of a Surgeon – Ivor Back by Sir William Orpen (1926). Oil on canvas. Courtesy of The William Orpen Sculpture Fund, Stillorgan, Dublin, Ireland. <https://sirwilliamorpen.com/portrait-of-a-surgeon-ivor-back-by-sir-william-orpen-1926/>

---

<sup>52</sup> Anon. International Congress of Surgery, 1923 (Note 5).

<sup>53</sup> Hamilton. *The Monkey Gland Affair*, 1986 (Note 11). p.60.

<sup>54</sup> Anon. Obituary. *British Medical Journal*. 1951; 2: 182.

<sup>55</sup> Anon. Obituary. *British Medical Journal*. 1951; 1: 1453.

<sup>56</sup> Anon. Obituary. *Lancet*. 1951; 257(6669): 1371.





Figure 4. Norman Haire, early 1940s. Photographer unknown. Wikimedia Commons. Public Domain.

[https://commons.wikimedia.org/wiki/File:Norman\\_Haire.jpg?uselang=en#Licensing](https://commons.wikimedia.org/wiki/File:Norman_Haire.jpg?uselang=en#Licensing)

Norman Haire (Figure 4) was an Australian gynaecologist who left his home country after being considered responsible for a fatal outbreak of influenza at the Newcastle (New South Wales) hospital where he was superintendent.<sup>57</sup> He arrived in London, in 1919, where he quickly established himself as one of the pre-eminent sexologists and sexual reformers of the day, working with the likes of Havelock Ellis (1859-1939) and Marie Stopes (1880-1958). Haire wrote extensively and organised, amongst other events, the World League for Sexual Reform's 1929 congress in London.<sup>58</sup> It is thought that Haire's interest in rejuvenation was in part driven by his lavish lifestyle since he was able to charge large amounts for his treatments.<sup>59</sup>

Haire began performing vasoligations shortly after arriving in the UK, and, in 1924, published the enthusiastic *Rejuvenation: The Work of Steinach, Voronoff and Others* in which he collated his own results alongside published series.<sup>60</sup> His most famous patient was the poet William Butler Yeats (1865-1939) who, following, and seemingly as a consequence of, his vasoligation in April 1934, began the third and final great phase of

---

<sup>57</sup> Wyndham. *Norman Haire and the Study of Sex*, 2012 (Note 4). p.61.

<sup>58</sup> Wyndham. *Norman Haire and the Study of Sex*, 2012 (Note 4). p.114.

<sup>59</sup> Wyndham. *Norman Haire and the Study of Sex*, 2012 (Note 4). p.417.

<sup>60</sup> Haire N. *Rejuvenation: The Work of Steinach, Voronoff and Others*. London: George Allen & Unwin Ltd; 1924.

his career.<sup>61</sup> Haire not only performed the operation, but then put his work to the test by arranging for Yeats to meet the novelist Ethel Mannin (1900-84), who had previous liaisons with the likes of the philosopher Bertrand Russell (1872-1970).<sup>62 63</sup> The physical extent of her relationship with Yeats is not clear, but they certainly exchanged sexually charged correspondence.<sup>64</sup>

Following the operation, Yeats reported also visiting Haire in London for (unspecified) daily injections, and it may be that his personal and professional relationship with him did more to address the poet's cultural, if not physical, impotence than the vasoligation, the effect of which would have been entirely placebic.<sup>65 66</sup> Haire continued to practise into the 1940s, at which point a combination of the Second World War and his declining health resulted in him moving back to Australia, after which he had no further involvement in rejuvenation therapy.<sup>67</sup> However, he came back to London in 1946 and continued to write on sexuality, including homosexuality, although he managed to keep his own homosexuality secret.<sup>68</sup> Haire became ill on a lecture tour of the United States in 1952 and died on his return to London. A comment on rejuvenation by him the year before simply read: 'Time and experience have shown that the Voronoff and Steinach methods there described were of little practical value'.<sup>69</sup>

Kenneth Walker (Figure 5) was the only urological surgeon of the three rejuvenators in Britain and performed both allografting (his speciality giving him ready access to donors) and vasoligation. In 1924, Walker delivered the third and final of his four Hunterian Lectures at the Royal College of Surgeons of England.<sup>70</sup> In honour of, and inspired by, John Hunter, the talks are delivered by surgeons at the cutting edge of their field on innovation in the discipline backed up by laboratory research. Walker's choice of topic, 'Testicular Grafts', could not have been more apposite for the middle of 'the decade of the testicle'.<sup>71</sup> In his lecture, he presented the cases of ten men, including war veterans, whom he had treated by the implantation of 'donated' human gonads. To avoid the risk of bias in interpreting the results, both among his patients and by himself as an investigator, Walker had enlisted the assistance of a Dr PO Ellison and Prof Winifred Cullis to undertake objective metabolic assessment of effect.<sup>72</sup> The grafts were primarily

---

<sup>61</sup> Foster RF. *W.B. Yeats: A Life. II: The Arch-Poet 1915-1939*. New York: Oxford University Press; 2003. p.569.

<sup>62</sup> Foster. *W.B. Yeats: A Life*, 2003 (Note 61). p.511.

<sup>63</sup> Foster. *W.B. Yeats: A Life*, 2003 (Note 61). p.514.

<sup>64</sup> Foster. *W.B. Yeats: A Life*, 2003 (Note 61). p.542.

<sup>65</sup> Wyndham. *Norman Haire and the Study of Sex*, 2012 (Note 4). p.260.

<sup>66</sup> Armstrong T. *Modernism, Technology, and the Body: A Cultural Study*. Cambridge: Cambridge University Press; 1998. p.133.

<sup>67</sup> Wyndham. *Norman Haire and the Study of Sex*, 2012 (Note 4). p.289.

<sup>68</sup> Wyndham. *Norman Haire and the Study of Sex*, 2012 (Note 4). p.417.

<sup>69</sup> Haire N (ed). *The Encyclopaedia of Sex Practice*. London: Encyclopaedic Press; 1951. p.798.

<sup>70</sup> Walker. Hunterian Lecture, 1924 (Note 3).

<sup>71</sup> Ellis H. The Hunterian Professors and Arris and Gale Lecturers. *Annals of the Royal College of Surgeons of England*. 1979; 61: 72.

<sup>72</sup> Walker. Hunterian Lecture, 1924 (Note 3).

from ectopic and poorly developed testicles and were mostly from males aged between 10 and 22.<sup>73</sup>



Figure 5. Portrait of Kenneth Macfarlane Walker (1882-1966). Date: 1958. Wellcome Collection, London. Licence: Attribution 4.0 International (CC BY 4.0). <https://wellcomecollection.org/works/wukbw9nx>

Walker also had the foresight to predict that grafting would be replaced by an effective extract once the 'internal secretion' of the testicle had been isolated.<sup>74</sup> It was only six months before Walker's Hunterian address that Voronoff had attended the International Surgical Conference at the RSM. While it is unclear if Walker was a delegate at the time that Voronoff presented his work on grafting chimpanzee testicles into humans, his involvement with the society suggests that he would have been aware of Voronoff's presence, and, certainly, Walker mentions discussing his research with him.<sup>75</sup> However, it is important to note that, despite accusations, Walker was never a 'monkey gland enthusiast', and, unlike Back, he only ever used human organs.<sup>76 77</sup> Walker would also publish his vasoligation results in *The Lancet*, in 1924, cautioning that the outcomes were difficult to interpret due to the potential of a placebo effect, and

---

<sup>73</sup> Walker. Hunterian Lecture, 1924 (Note 3).

<sup>74</sup> Walker. Hunterian Lecture, 1924 (Note 3).

<sup>75</sup> Walker. *A Commentary on Age*, 1952 (Note 14). p.60.

<sup>76</sup> Sengoopta. *The Most Secret Quintessence*, 2006 (Note 7). p.278.

<sup>77</sup> Walker. *A Commentary on Age*, 1952 (Note 14). p.60.

he later reflected that he had observed no benefit to men undergoing the operation.<sup>78 79</sup> His involvement in the rejuvenation craze was limited, with only a small number of procedures being performed by him, and in 1952 he would liken the results of grafting and vasoligation to reverse the effects of ageing to those interventions sought in previous centuries of 'magicians and witches'.<sup>80</sup>

## **The waning of interests**

As Walker had predicted, in 1929, testosterone was finally isolated and extracted from bulls' testicles and men's urine, before being synthesised, from 1935, leading to its therapeutic use.<sup>81 82 83</sup> However, the impact of this treatment on conditions that the rejuvenation operations purported to address was minimal.<sup>84</sup> Interestingly, it was the deprivation of testosterone, and not supplementation, that proved a key medical advancement: experiments of castrating dogs to reduce benign prostatic hyperplasia, by the Chicago-based urologist Charles Huggins (1901-97), led to the serendipitous discovery that the procedure could reverse prostatic cancer growth, for which Huggins would receive the Nobel Prize in Physiology or Medicine in 1966.<sup>85 86</sup>

While the enthusiasm in Britain for rejuvenation therapy had never reached the manic heights that it did elsewhere, the subject was widely known, and the belief in the presumed restorative power of the gonad was exemplified in the controversy surrounding the 1939 Football Association (FA) Challenge Cup Final between Portsmouth and Wolverhampton Wanderers.<sup>87 88</sup> The match, known as 'The Monkey-Gland Final', involved an accusation of doping, since the Wolverhampton players were said to have been injected with simian testicular extracts during the preceding season by their progressive manager, ex-England International, Frank Buckley (1882-1964).<sup>89</sup> Jack Tinn (1878-1971), who managed the less fancied Portsmouth, claimed that he too had

---

<sup>78</sup> Walker K, Lumsden Cook JA. Steinach's Rejuvenation Operation. *Lancet*. 1924; 203(5240): 223-226.

<sup>79</sup> Walker K. The Accidents of the Male Climacteric. *British Medical Journal*. 1932; 1: 50-53.

<sup>80</sup> Walker. *A Commentary on Age*, 1952 (Note 14). p.60.

<sup>81</sup> Parkes AS. The Rise of Reproductive Endocrinology, 1926-1940. *Journal of Endocrinology*. 1966; 34(3): xx-xxxii.

<sup>82</sup> Sengoopta. *The Most Secret Quintessence*, 2006 (Note 7). p.158.

<sup>83</sup> Nieschlag E, Nieschlag S. Endocrine History: The History of Discovery, Synthesis and Development of Testosterone for Clinical Use. *European Journal of Endocrinology*. 2019; 180(6): R201-R212.

<sup>84</sup> Walker. *A Commentary on Age*, 1952 (Note 14). p.60.

<sup>85</sup> Walsh P. How Charles Huggins Made His Nobel Prize Winning Discovery - In His Own Words: An Historic Audio Recording. *Prostate*. 2012; 72(16): 1718.

<sup>86</sup> The Nobel Prize. Nobel Prize in Physiology or Medicine 1966. Charles B. Huggins – Facts. <https://www.nobelprize.org/prizes/medicine/1966/huggins/facts/> (accessed 20 July 2025).

<sup>87</sup> *Hansard*. H.C. Vol. 218, col. 976. (13 June 1928).

<sup>88</sup> Goddard JC. Monkey Glands. *Urology News*. October 2020. p.19.

<sup>89</sup> Carter N. Monkey Glands and The Major: Frank Buckley and Modern Football Management. In: Day D (ed). *Sporting Lives*. Crewe: Manchester Metropolitan University Institute for Performance Research; 2011.

been supplementing his team, but with bulls' testicular extracts. Whether he had, or whether this was an early example of 'mind-games' in football, the underdogs ran out 4-1 winners (Figure 6).<sup>90</sup>



Figure 6. Presentation by the King of the 1939 FA Cup to Portsmouth Football Club. Courtesy of the Pompey History Society Archives. <https://pompeyhistory.org/>

## Conclusion

Britain's relatively muted response to the rejuvenation craze reflected reticence towards matters of sex more broadly and the impact of opposition from vested interest groups. Of the three British surgeons undertaking such procedures: Back was an early enthusiast and supporter of Voronoff; Haire, who favoured Steinach's vasoligation, benefitted financially from performing a procedure that was not a natural fit for a gynaecologist; Walker's approach was more cautious and measured. In 1936, shortly after rejuvenation therapies had been discredited, Walker would reflect on the eternal futility of attempts to resist our inevitable demise: 'Not by the clumsy grafting of Voronoff, nor by the injecting of extracts or by the drinking of cordials, can Time's hand be stayed'.<sup>91</sup>

<sup>90</sup> Carter. *Monkey Glands and The Major*, 2011 (Note 89).

<sup>91</sup> Walker K. *The Intruder: An Unfinished Self-Portrait*. London: Dickson Limited; 1936. p.2.

## **Biographical details**

Dominic Hodgson MBChB MA MSc FRCS(Urol) is a consultant urologist at Portsmouth Hospitals University NHS Trust, and Senior Lecturer and PhD student at the University of Winchester.

## **Acknowledgements**

The author would like to acknowledge Professor Chris Aldous and Dr Graciela Iglesias Rogers, his PhD supervisors, for their support, and thank Colin Farmery and Dominic Lee for their kind help in sourcing illustrations.

## **Sources of funding**

The author did not receive any funding in support of this work.

Hodgson D. 'No Sex (Glands) Please, We're British': The Response to the 1920s Rejuvenation Craze. *Topics in the History of Medicine*. 2025; 5: 15-28.

*Topics in the History of Medicine* is an Open Access publication of the British Society for the History of Medicine made available under a Creative Commons Attribution-NonCommercial 4.0 International Licence which allows unrestricted redistribution in any medium or format for non-commercial purposes provided the original work is properly credited. <https://bshbm.org.uk>

© *The Author(s)*, 2025.