

Illustrations from the Wellcome Institute Library

Medical Gymnastics and the Cyriax Collection

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Make use of fresh air and clean water; let the sun shine upon you, and do not let a day pass without every muscle and every organ in your body being set in brisk motion, even if only for a short time. Stagnation in this case, as everywhere else in nature, is abnormal and leads to drooping and untimely death. Motion is life.¹

Medical gymnastics is the use of physical exercise as therapy or to maintain health. In modern times the virtues of a regular workout or a jog around the park are so widely recognized as to need no justification, and the respectability of physiotherapy is well established. However, this has not always been the case. Tracing the historical development of physical culture, from the Greeks to the modern gym, sheds interesting light on changes in the conception of the body and of what it means to be healthy.

The Wellcome Institute Library has a fascinating and diverse collection of material on this subject, including archives, pictures and manuscripts as well as printed books. There have recently been exhibitions in the library highlighting these works, some of which spent long mysterious years waiting in the stacks and have been catalogued only within the last couple of years. The collection has arisen from various origins (for example, we have the archives of the Chartered Society of Physiotherapy, an extremely valuable resource), but the one which predominates is the personal library of Edgar F Cyriax (1874–1955), acquired in 1956.

Cyriax was a practising physiotherapist and an apostle of Swedish gymnastics. He studied the subject at the famous Kungliga Gymnastiska Centralinstitut in Stockholm, with such enthusiasm that he even married the daughter of its director, Henrik Kellgren. He moved with her back to London and set up his own “mechanotherapeutics” practice there, which he continued to run for the rest of his life. He also devoted his energies to publishing numerous papers and articles on medical gymnastics—including a bibliography,² and above all he was a voracious collector of printed material relating to the subject: we have his own manuscript catalogue of his collection.³ Clearly a believer in practising what he preached, he was himself very fit: he played rugby, cycled to work

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originally published in Danish as *Mit system*, [190–?].

² Edgar F Cyriax, *Bibliographia gymnastica medica*, Wörishofen, n.p., 1909.

³ WMS 2015.

¹ J P Müller, *My system*, rev. English ed., London, Ewart, Seymour & Co. [19–?], p. 9. The book was

every day, always climbed stairs rather than using the lift, and prided himself on taking a cold bath every morning.⁴

This regime must have been good for him, since he lived to nearly 81, but even cold baths do not bestow immortality. After his death, the collection was given by his family to the Royal Society of Medicine, which set most of it aside for pulping. An alert library assistant, Arthur Greenbaum, contacted Sidney Watkins, his counterpart at the Wellcome Library, and the collection passed to the Wellcome for a payment of £10 in 1956. By the time it arrived, early in 1957, Arthur Greenbaum had himself joined the Wellcome staff, and must have felt that the collection was pursuing him like the Ancient Mariner's albatross. Manuscripts and early printed books were extracted immediately, but the bulk of the material remained untouched in the Wellcome storehouse (then at Dartford, later at Enfield). It was eventually added to the card catalogue in 1974 but had to wait a further decade before being integrated into the Modern Medicine collection.⁵

This neglect is understandable. Much of the material had a distinctly unattractive appearance, being bound in acidic, amateurishly designed wrappers. The value and interest of the texts would have been harder to perceive then than now, when the importance of exercise is recognized, the history of the body is a fashionable area of study, and the development of exercise therapy in the early years of this century can more readily be put into context.

Medical gymnastics has an ancient pedigree. The Greeks famously had a highly developed sense of physical health and beauty, and athletics formed an important part of every aristocratic boy's education. The specifically therapeutic use of exercise is said to begin with Herodikos of Selymbria, a trainer at a gymnasium, who lived in the fifth century BC. He treated himself with dieting and gymnastics, and lived to a ripe old age which he spent recommending the same thing to others. He became well-known, and is mentioned by Plato, who says that "he proceeded to make first and foremost himself, and then many others after him, miserable by a combination of medicine and physical training . . . [and] by dying a lingering death".⁶ Apparently his favourite prescription was a walk from Athens to Megara and back. He is criticized for over-enthusiasm in the Hippocratic writings, however: apparently he was prone to prescribing exercise in cases where it was unsuitable, such as for fever patients.⁷

The Hippocratic writings do mention massage and after-dinner walks in passing, but Galen was the first to write an extended treatise on the subject. His *De sanitate tuenda* deals with the benefits of exercise at considerable length: he explains why it works, details the type of movement suitable for each disease and each category of patient, and gives numerous case studies such as that of a boy with an underdeveloped chest whose condition was improved by arm movements, swinging and holding the breath. The reasons he gives for the benefits of exercise are as you would expect in the Galenic system of medicine: it balances the effects of eating and drinking by drying out what is too damp and warming what is too cold, so that the excessive substance of the body is evaporated and expelled. The important thing is to maintain harmony between these principles, avoiding excess and imbalance in any direction.

⁴ Obituary, *Br. med. J.*, 1955, i: 545–6.

⁵ Thanks to Arthur Greenbaum and John Symons for this account.

⁶ Plato, *The Republic*, transl. H D P Lee. Harmondsworth, Penguin, 1955, III, 406.

⁷ *Epidemics*, Book 6, section 3.18.

Galen's views utterly dominated thinking on the subject until the seventeenth century. Other writers emphasized different aspects, discussed their own individual experiences, and recommended a wider variety of activity, but few strayed far from Galen's interpretation of *why* it worked. Our own conception of why exercise is good for you (strengthening the cardiovascular system, building up muscles, and so on) is just as deeply ingrained, of course, so it requires an effort of the imagination to realize how equally self-evident the Galenic view appeared at the time.

During the Renaissance and the centuries after, the Greek medical theory was accompanied by a fascination with Classical imagery, and this was to continue to the present day. The muscular Greek figure, of both the Adonis and the Hercules varieties, was a perennial feature of gymnastic illustration. One of the earliest and most lavish examples of this is Girolamo Mercuriale's book *De arte gymnastica*, of which the second edition (Venice, 1573) was the first to be fully illustrated. It features full page woodcuts showing wrestlers, boxers and gladiators in action, with lovingly delineated muscles. Mercuriale (1530–1606) spent seven years writing the book and researching the pictures, and quoted nearly 200 texts.

A change came in the seventeenth century, with the rise of the new mechanical school of anatomy. The body was redefined as a machine rather than a soup of humours. Anatomists such as G A Borelli (1608–1679) investigated the functioning of the bones and muscles, interpreting the structure as a well-designed piece of clockwork, with moving parts which needed maintenance to work at maximum efficiency. The mechanists were not themselves very interested in physical therapy, but their theories laid the foundation for a thoroughly new conception of how exercise worked. The body was dynamic and plastic: it could be stretched and modified. Nicolas Andry (1658–1742) founded the new science of orthopaedics on this basis. In his book *L'orthopédie* (Paris, 1741) he exemplified this belief with the famous illustration of a bent tree straightened by being bound to a rigid stick: it implies that, like a young tree, the skeleton is not inert but is a living structure which can be persuaded into shape as it grows.

The whole style of thinking about physical exercise changed dramatically again in the early nineteenth century, mainly through one very influential figure: Per Henrik Ling (1776–1839). His institute in Stockholm, the Kungl. Gymnastiska Centralinstitut (founded 1813), became the training centre for physical therapists from all over Europe, and they took away with them his newly scientific, detailed analyses of movement, as well as his passion for popularization and his sense of the moral and spiritual significance of fitness.

Ling was born in a small village in Småland. He was not medically trained, but like Herodikos he achieved a self-cure which turned into a conversion experience (this was a common feature of many accounts of medical gymnastics). He suffered from rheumatism and paralysis of the right arm, but was cured after taking up fencing, and was thus inspired to teach gymnastics. He was a charismatic individual, and, as well as being fencing master and "gymnasiarch", he lectured on Nordic mythology and wrote epic poetry (described by some contemporary critics as "the most longwinded . . . in the language").⁸ Much of this poetry was patriotic in nature, and he would not allow any foreign objects in his house,

⁸ Discussed in A Georgii, *A biographical sketch of the Swedish poet and gymnasiarch, Peter Henry Ling*, London, H Baillière, 1854, p. 53.

nor was his family allowed to wear any foreign clothing. It is hinted that he had a weakness for attractive young women,⁹ and he clearly had a phenomenal talent for inspiring others. He saw in gymnastics the foundation for the spiritual and political rejuvenation of the nation.

Ling sought to codify the processes of gymnastics, discovering exactly how they worked: each movement was defined by starting point and end point, the line through which each part of the body passes, and its speed and rhythm. Thus every movement could be precisely identified and described. For Ling, movement embodied a universal principle—the law of life itself, and where this law was frustrated, the result was decay and deformity in place of the noble form of man.

This sort of rhetoric was to be a feature of much writing on physical culture from then on, and well into the twentieth century. Another feature was the disturbing presence of militaristic and nationalistic ideas. A good example of this was the Prussian educationalist Friedrich Ludwig Jahn (1778–1852). Jahn was extremely nationalistic even by Prussian standards, and spent his life oscillating between periods of great success and acclaim and periods in which he was anathematized and imprisoned for fomenting right-wing rebellion. Following an unsettled youth, he became a teacher in Berlin and founded a number of *Turnplätze*, arenas filled with new kinds of gymnastic equipment: wooden horses, balance beams, parallel bars. At first they were designed for the use of boys at the military academies, but they became increasingly popular with adults, and *Turnplätze* started to spread outside Berlin as well. However, Jahn was arrested in 1817 for delivering a series of inflammatory public lectures on the subject of German nationhood, and following a lengthy trial was exiled from the capital and forbidden to live in any city that contained a university or higher school for boys.

A similar figure was Guts Muths, another Prussian pedagogue who became very influential. His books¹⁰ showed scenes of boys exercising on complex equipment in leafy, sylvan settings: this was very much a feature of gymnastics in the romantic era. The natural, healthy state of the body was equated with the state of nature generally: these were the early days of a cult of fresh air, sunshine, cleanliness and fitness that was to become very popular.

The invention of new kinds of gymnastic equipment was also a significant development during this period. One of the pioneers was Jacques-Mathieu Delpech (1777–1832). His institute in Montpellier (founded 1825) provided therapy, comfortable accommodation, and an idyllic country setting for residential patients, who would normally stay there for one or two years. The buildings were surrounded by a maze of garden paths which linked areas filled with elaborate, large-scale gymnastic equipment.¹¹ Unfortunately the experiment was shortlived: Delpech was shot in 1832 by a deranged patient while he was returning to the Institute from a trip to the city. The coachman was also shot dead, and the horses galloped home with the bodies. Bereft of its leader, the Institute closed shortly afterwards.

An even more skilled designer of apparatus was Gustaf Vilhelm Zander (1835–1920). A Swede who developed ideas for increasingly precise and elaborate equipment while

⁹ *Ibid.*, p. 46.

¹⁰ Notably *Gymnastik für die Jugend*, Schnepfenthal, Erziehungsanstalt, 1793.

¹¹ J-M Delpech, *De l'orthomorphie*, Paris, Gabon, 1828.



Figure 2: This portrayal of healthy, exuberant boys in a leafy natural environment was typical of the romantic period. From J C F Guts Muths, *Gymnastik für die Jugend*, Schneepfenthal, Erziehungsanstalt, 1793. EPB 27004/A. (Wellcome Institute Library, London.)

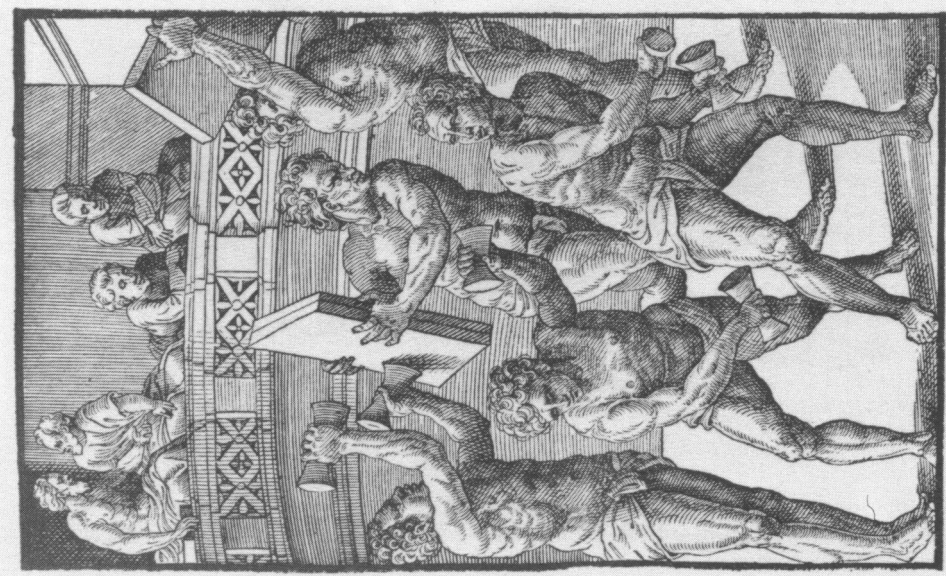


Figure 1: Muscle-bound athletes demonstrate their prowess in the gymnasium. From G Mercuriale, *De arte gymnastica*, Amsterdam, A Frisius, 1672. EPB 3647/C. (Wellcome Institute Library, London.)

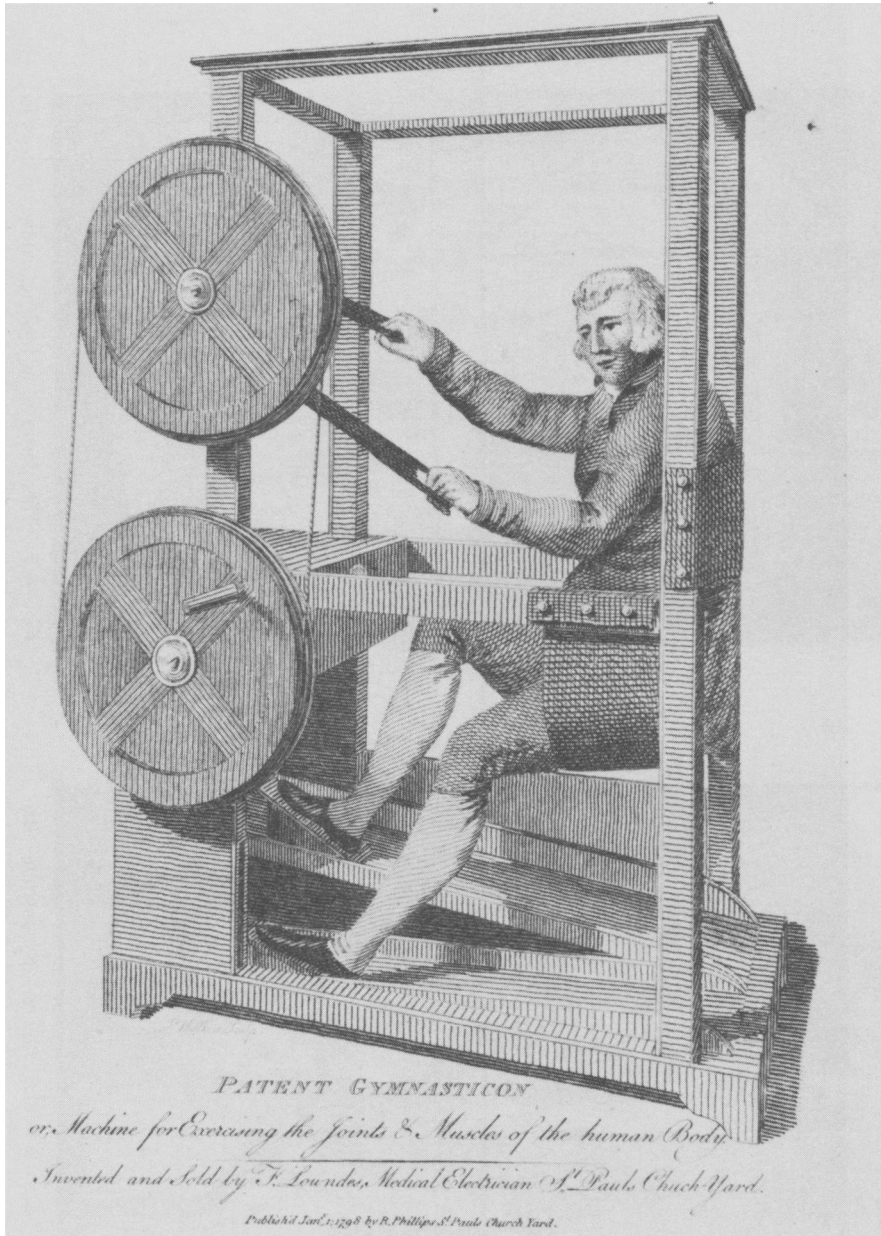


Figure 3: An early exercise bike, designed for working the muscles of the legs and upper body at the same time. The *Patent gymnasticon*, engraved by J Walker, London, 1798. Iconographic Collections. (Wellcome Institute Library, London.)

studying Ling's gymnastics in Stockholm, he founded his own first institute in 1864. Zander Institutes were enormously successful and soon spread all over Europe.¹² They were filled with Zander machines, scientifically designed to twist every part of the body in every possible direction for maximum physical effect. The Institutes had a rather alarming atmosphere, judging by contemporary descriptions, filled as they were with devices that looked like instruments of torture, usually arrayed against bare walls in large rooms and strung about with contorted, sweating human bodies.

By the early years of the twentieth century gymnastic institutes had spread all over the Continent, and were becoming very popular in America as well. Medical gymnastics was increasingly established as a therapeutic discipline, with highly specialized applications. There were exercises for pregnant women, for women with gynaecological disorders, for young children, for people with all sorts of disability, for musicians (finger exercises for pianists, breathing exercises for singers), and after the First World War, for the maimed and shell-shocked. Each speciality was catered to by private consultants and institutions as well as burgeoning numbers of self-help books, illustrated with photographs of earnest-looking figures doing the exercises.

As well as therapeutic uses, there was an increasing interest in gymnastics for the already fit, following the Ling tradition of spiritual and physical perfectibility. A number of popular body-builders and fitness experts achieved fame: J P Müller, for example, whose *My system* inspired such paragons of physical strength as Franz Kafka, who exercised naked at an open window for fifteen minutes every morning and longed to convert his flimsy frame into what he regarded as a "solid", muscular, suntanned body. Müller deplored the body of the pale intellectual or office worker. "Illness is generally one's own fault", he wrote: it was the responsibility of the individual to keep the decadent perils of modern life at bay through good diet, nudism, deep breathing, vigorous bathing, brisk towelling and a daily exercise routine.

A similar character was the professional strong man Eugen Sandow (1867–1925), who converted his stage career into an equally successful one promoting popular health: he published several books and a magazine, *Sandow's magazine of popular culture*, to inspire young people mainly by photographs of himself in heroic poses. Another notable character was Bernarr McFadden (1868–1955), who went even further in advocating love of the body, to the point where he was accused of promoting sexual libertarianism. His story was another case of the familiar self-cure and conversion experience: at fifteen he changed himself from a frail weakling showing signs of tuberculosis to a throbbing Hercules of strength. The most famous example of a Road to Damascus experience, of course, is Charles Atlas, who as Angelo Siciliano actually did get sand kicked in his face on the beach at Coney Island. The solution came to him when he saw a classical statue at the Brooklyn Museum, and inspired also by a picture of Eugen Sandow and MacFadden's book *Physical culture* he began an exercise programme which turned him into the "World's Most Beautiful Man" in 1921 and "America's Most Perfectly Developed Man" in 1922.¹³

¹² On the Institute that Zander opened in London, see Takahiro Ueyama, 'Capital, profession and medical technology: the electro-therapeutic institutes and the Royal College of Physicians, 1888–1922', *Med. Hist.*, 1997, 41: 150–81, pp. 163–8.

¹³ D J Mrozek, 'Sport in American life', in K Grover (ed.), *Fitness in American culture*, Amherst and Rochester, Margaret Woodbury Strong Museum, 1989, p. 35.

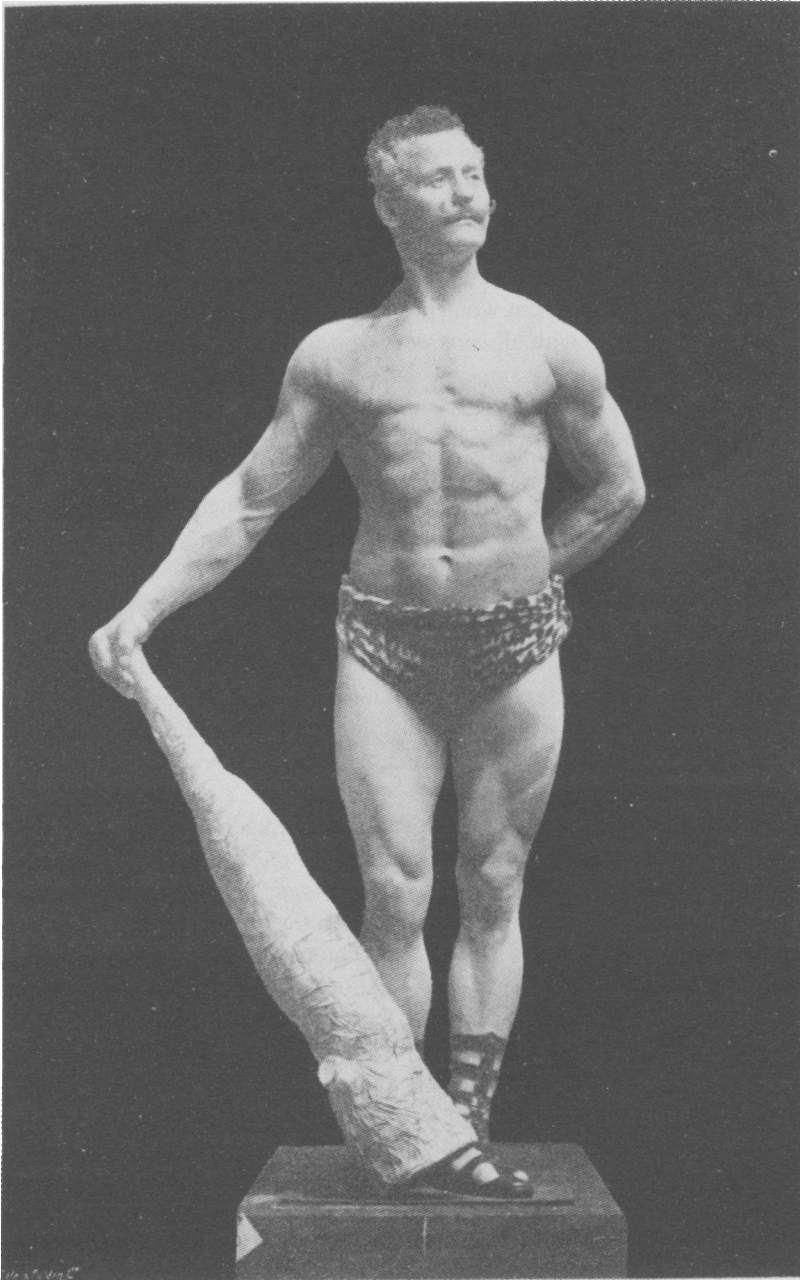


Figure 4: Sandow strikes a Herculean pose to show what body-building can achieve. From E Sandow, *Body-building, or man in the making*, London, Gale & Polden, 1904. Modern Medicine Collection. (Wellcome Institute Library, London.)

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All this open-air rusticism took a sinister turn in Europe in the 1930s, when the Nazis seized on the ideology to prop up their own version of nature romanticism. Publications of the period show row after row of blond youths performing synchronized gymnastics in vast stadiums. These spectacles were designed to look exciting, but also terrifying. The cult of strength was mixed with the threat of violence. These were elements which had been present in the fitness movement for over a century: an attachment to nationalism and Nordic mythology, an aversion to “decadent” urban life, anti-rationalism.

However, there was another aspect to this anti-urban tradition, and that was the pacifist, anti-authoritarian side which traces its ancestry back to the romantic concept of the “noble savage”. This spawned various anti-Establishment back-to-nature movements in the twentieth century which survived the Second World War to resurface in the sixties: communal living, self-sufficiency, nudism, vegetarianism, “flower power”. This tradition also placed faith in the body and the concept of a healthy life in tune with nature, but with a different and more tolerant emphasis.

Today, the more exalted side of medical gymnastics survives in practices such as yoga, which blend exercise routines with a desire for spiritual development and purification. However, for the most part the fitness industry has become prosaic: the benefits of exercise are too well-known to inspire much rhetoric. All the same, it is very interesting to see the history that lies behind the fashionable aesthetic of today’s gymnasium or sports centre, filled as it is with bizarrely-dressed acolytes performing ritual feats of strength and endurance on assemblages of complex machinery, as if they were celebrating some sort of religion of the body.

Edgar Cyriax’s collection reflects the whole evolutionary span of medical gymnastics, especially that from the Ling era to the 1930s. It includes several thousand books and pamphlets, around 80 journal titles and a couple of dozen manuscripts. The collection is particularly strong on therapeutic institutes in Europe, but there are also advertising leaflets and guides for mechanotherapists in Argentina, Chile, India, China and Japan. There is material in English, French, German—and of course plenty in Swedish. There are notes and case books relating to his and other practitioners’ institutes in this country and elsewhere. Cyriax’s interests encompassed fitness and exercise therapy of all sorts, using all kinds of machines and contraptions and claiming to cure a vast range of disorders.

Most of the collection is now fully catalogued and incorporated in the main part of the Wellcome Institute Library. Although it is predominantly on closed access, it is easily accessible via the online catalogue. Together with other similar material, the Cyriax collection provides a varied and enlightening resource for anyone interested in the history of physiotherapy, health regimens and body culture, or in the social history of the body generally.