

IN MEMORIAM LEO CLODIUS

April 29, 1930 - September 17, 2025



Leo Clodius at home (left, upper), with Professor Michael Földi (upper, right), at the market (lower, left), and with Professor Piller (on left side of the lower, right image).

Leo Clodius was born on April 29, 1930, in Zurich, the child of a practicing physician and his wife. He lost his mother at the age of 13 and grew up mainly in boarding school. After graduating from high school, he studied medicine at the University of Zurich, where he also completed his specialist training as a surgeon.

In the following years, he specialized in

the field of plastic surgery and began to take a particular interest in the lymphatic system. In addition to animal experiments, he conducted research into the pathophysiology of secondary chronic lymphedema in humans. The focus was on possible surgical therapies. He was the first plastic surgeon to perform lymphatic vessel transplants and lymphovenous shunts.

In his book, "Pathophysiology of Secondary Chronic Lymphedema," he reported on the indications, contraindications, and therapeutic successes of surgical measures (1980).

In addition to his medical work, he taught medical students and interested colleagues at the University of Zurich in the field of lymphology. He was actively involved in scientific medical societies, such as the International Society of Lymphology (ISL), which was founded in Zurich in 1966. He was president of this society from 1977 to 1979. He was co-editor of the journal "*Lymphology*." Through his activities, he was a founding member of other lymphological societies, such as the Society of German-Speaking Lymphologists (GDL) in 1987. In 2003, he received the Mascagni Medal at the ISL Congress in Freiburg, Germany, in recognition of his achievements in the field of lymphology. After retiring from the university

hospital, he founded a special outpatient clinic in Zurich for conservative and surgical treatment of chronic lymphedema.

Since the founding of the Földi School in the early 1980s, he has been a lecturer in Freiburg and has taken over the medical training of physiotherapists in the field of pathophysiology of lymphedema from a surgical perspective.

Leo Clodius was not only an excellent surgeon who treated his patients from a holistic medical perspective, he was also involved in charitable institutions to help people in need.

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I first met Leo when we worked in our Microcirculatory Research Lab in Adelaide University lead by Dr John Casley-Smith. At this stage I was initially studying the mode of action of a group of medications called the Benzopyrones. These were medications which induced extracellular proteolysis, which then allowed fragments to clear the tissues and helped in resolution of oedemas. After being enthused by his comments about how we could better help those with lymphoedema, I had the great pleasure studying with Leo Clodius in the Plastic and Reconstructive surgery department in 1975! I was interested to see and learn more of the nature of lymphoedemas and how to create them for investigative purposes and then better manage them. Leo was just the person to learn from!

When I first arrived at his experimental clinic within the Department of Plastic and Reconstructive Surgery, I soon learned that Leo was a pioneering figure in the field of lymphatic surgery and plastic surgery. He made significant contributions to the treat-

ment of lymphatic diseases, which were previously overlooked but are now recognized for their substantial impact on quality of life. His work set new standards in the treatment of lymphoedema and other lymphatic disorders.

He was instrumental in the development of microsurgical procedures to treat lymphatic diseases. I witnessed in his Zurich plastic and reconstructive clinic procedures like lympho-venous anastomosis (LVA), vascularized lymph node transfer (VLNT), and vascularized lymphatic vessel transfer (VLVT). He was a leader of these techniques and way ahead of his time. As part of his and the research of other leaders at the time (Drinker, Olszewski) we soon learned of the regenerative powers of the lymphatics (they found regeneration even after 4 days post op!) when either the deep or superficial systems were compromised and learned about the powers and capabilities of the deep and superficial lymphatic systems.

I was impressed and amazed by his experimental models of lymphoedema. The

first an attempted total block of the superficial and deep compartments showed shunts did not develop in time to produce sufficient internal drainage to control oedema and in fact there were very high mortalities associated with massive post-op swelling. Clinically, of course, such occurrences are rare. His second model was a total block of the deep compartment with only a partial block of the superficial compartment. This mimicked the procedure in humans when lymph flow from the deep system is interrupted by surgery and radiotherapy as in axillary and inguinal node removal. What was then created were experimental skin flaps containing unaltered lymphatics for epifascial drainage improvement and lymph venous shunts. The swelling soon resolved. His third model – a total block of the superficial compartment, showed a marked initial swelling with a latent phase and eventually chronic oedema. The clinical value of this was that it showed an epifascial block alone could lead to lymphoedema once the deep collector systems to which all superficial lymph drained failed/decompensated.

His innovative techniques certainly have improved the quality of life for many patients suffering from lymphoedema. If you would like to see and learn of how advanced his knowledge and others in the field was in the 1970's, have a read of his book "Lymphoedema" George Thieme Stuttgart, 1977. (Supplement to "*Lymphology*"). Then you will see the importance and significance of his contributions to the world of lymphoedema treatment, imparting upon us his and others acquired knowledge of the structural and functional aspects of the deep and superficial lymphatic systems especially from the microsurgical and imaging aspects but also in terms of strategies for conservative management.

In addition to his clinical work, Leo Clodius was also involved other research and training. He initiated and supported various research projects and clinical studies, making significant contributions to the medical community around the world. His legacy continues to inspire and guide the work of specialists in the field of lymphatic surgery.

Leo Clodius' work is to this day carried on by the Leo Clodius Lymphatic Centre in Zurich, which specializes in the treatment of lymphatic diseases. The centre follows a holistic treatment model, providing personalized care from diagnosis to final treatment. It is staffed by a team of recognized and experienced specialists who continue to build on Leo's pioneering work

Leo Clodius made a difference to my life though his knowledge and enthusiasm to question our knowledge and provide answers to questions we all had. He has added knowledge to surgeons and clinicians and therapists around the world in terms of how we can better deal with those with lymphoedemas or those at risk of it.

Your knowledge will live on in all of us.
Vale Leo.

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