Biographical Sketch

William Russell MacAusland, MD 1882–1965

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Abstract This biographical sketch on William Russell MacAusland corresponds to the historic text, *The Classic: Total Replacement of the Knee Joint by a Prosthesis*, available at DOI [10.1007/s11999-010-1305-9](https://doi.org/10.1007/s11999-010-1305-9).

William Russell MacAusland was born in 1882 in Taunton, Massachusetts [4]. He graduated from Harvard Medical School in 1903. He interned at Worcester City Hospital in Worcester, Massachusetts, and then served as an assistant to Dr. Elliott Brackett at the Massachusetts General Hospital. He began his own practice at the Carney Hospital, where he became the Surgeon-in-Chief, but maintained affiliations at the Massachusetts General Hospital, the Bunage Hospital, and Tufts Medical School. He spent several years in Newfoundland, with Sir William Grenfeld, who had founded a mission hospital for the Royal National Mission to Deep Sea Fishermen in 1893. MacAusland (known as “W.R.” by his close friends and colleagues [4]) later established clinics in various hospitals in New Hampshire, Vermont, and Maine, and had a driver, “Murphy” [4], transport him every few weeks to these clinics over the next 25 years. (MacAusland’s brother, Andrew R., and his son, William, Jr. (1922–2004), were both prominent orthopaedic surgeons and his son became President of the American Academy of Orthopaedic Surgeons.)

MacAusland was intrigued by clinical and basic questions and published in a wide variety of areas. His first two papers dealt with the treatment of scaphoid fractures [8] and a combined experimental (rabbits) and clinical study of growth arrest [5]. As with most orthopaedic surgeons at the time, he had a wide range of interests, but particularly related to arthroplasty. His first paper on the topic, published in 1914, dealt with arthroplasty of the elbow [6]. Perhaps his last paper was the one we reproduce this month, “Total Replacement of the Knee Joint by a Prosthesis” [7]. MacAusland was not the first to report total knee replacement. He acknowledged two previous efforts. Borje Walldius in 1953 reported using a prosthesis made of acrylic resin joined

Fig. 1 Dr. W. Russell MacAusland is shown. This figure is © 1966 by the Journal of Bone and Joint Surgery, Inc. and is reprinted with permission from William Russell MacAusland, 1882–1965. *J Bone Joint Surg Am.* Mar 1966;48:401–402.

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by a steel rod to serve as a hinge [9]. (A description of this device, its evolution, and the findings in 23 patients appeared in an abridged version of his 1957 thesis in CORR as a Classic [10].) Leslie Shiers, in 1954, described a stainless steel hinged implant with a report of two patients. In one the knee became encased in new bone by two months postoperatively and he performed an arthrodesis. In the second patient motion was retained. MacAusland's device, like that of Shiers, was made of metal (Vitallium). His device had perforated flanges for bone ingrowth. He reported one patient who had good motion and was "extremely pleased" at 11 months. The next advances came with elimination of the hinge in the early 70s by Gunston in 1971 [3], and by Freeman et al. and Coventry et al. in 1972 [1, 2], all three using differing design concepts. Early pioneers such as MacAusland made great strides for patients, while trying something that must have seemed radical at the time. If many radical approaches fail to successfully address the problems for which they are intended, most major advances that successfully address problems do seem radical at the time.

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