

# History of Braces and Prostheses in Lebanon

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Till the beginning of the twentieth century prostheses and braces in Lebanon were made by carpenters and shoe makers.

In 1910 my father, Jabra Mikael, made the first prosthesis in the Middle East. He was encouraged by a physician who gave him the catalog of A. A. Marks of New York, who was quite famous at that time. This catalog was his chief help until about 1914.

During the first World War the government of our country, still under Ottoman dominion and co-allied with Germany, sent my father to Berlin for further professional training.

The manufacture of prostheses remained rather an artisan type of work, because there were few amputees, and most of them had a poor morale toward prostheses. This condition existed for a long time, and "Jabra Mikael and Son" was the only orthopedic and prosthetic establishment at that time in Lebanon.

I had obtained my school diploma in 1945, and then had started working with my father. There were no doctors to prescribe the type of braces, corsets, or prostheses. I had to be the doctor, the manufacturer, and subsequently the fitter.

There were no set-ups nor accessories. The lower extremity prostheses were made of willow wood and leather, the latter usually being advised to new amputees. Both kinds had lateral and medial steel bars with movable



JABRA MIKAEL (1887-1946)



GEORGE MIKAEL

knee joints. The feet were made of wood with movable steel ankle axis. Upper extremity prostheses were very few in number, as the amputees found any type of artificial arm very complicated. As for the braces, mostly for poliomyelitic cases, the conventional type of braces were applied with only steel bars. Because of the lack of good aluminum, poor results were obtained with aluminum-made braces. All the parts of artificial limbs and braces were made in our facility. The average number manufactured per year was ten to fifteen prostheses, mostly lower extremity, and fifteen to twenty polio braces.

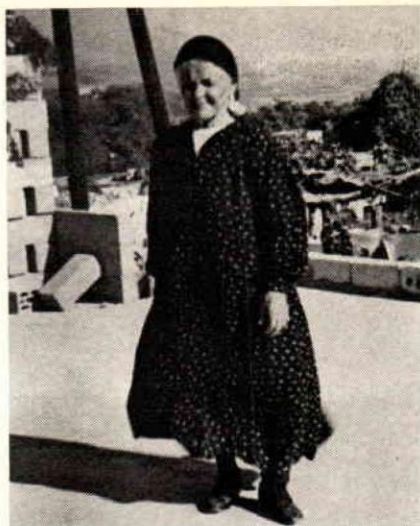
I must mention that at that time there was no government aid nor public assistance. Amputees and polio patients paid for their own appliances. Late in 1958 the government decided to grant a budget for war amputees and poor people. Since the amount of the budget was very low, only a few people were furnished with prostheses made in the so-called Welfare Education Center, with very high prices (much higher than the prices in Europe and the U.S.A.). It was the same in the next year.

During 1959-60 I did not make any prostheses in my facility. This was also the case with my competitors. (By now there were three facilities in Lebanon). Foreseeing this crisis, I took the opportunity to travel to Europe for further professional training. I went to Germany, Belgium, and England, where I became a Fellow of the Artificial Limbfitters of Great Britain.

I was amazed to see the rapid technique of manufacturing artificial limbs by means of ready-made set-ups, excellent aligning machines, and the jigs. After three months' training in different countries, I returned to Lebanon where I mounted a workshop which, though relatively small, was the best and was equipped with the most recent equipment. Parts, accessories, and set-ups were ordered from the U.S.A., Germany, and England. I became a member of AOPA, and received educational books from the U.S.A. and manuals from the VAPC.



My oldest male B.K. amputee: he is 79. His first leather prosthesis was made in our facility in 1937; the second wooden one in 1955, and the third with the government subvention in 1962. This is an excellent P.T.B. case, but the government urges us to mount knee joints on the plastic shank. He is a farmer and doing all right, wears the prosthesis 16 hours a day, and he says, "I sleep with it when I am in the field full season."



This is my oldest female B.K. amputee and is 82 years old. She was amputated some 35 years ago and had her first prosthesis only in 1962 paid by the government. It was hard to keep up her morale during the first four weeks; but now she is doing very fine and tries to compete with the young ones.

I must mention here, with thanks, the valuable help of Mr. Anthony Staros of the VAPC for the manuals which he sent me; the *Artificial Limbs* periodical sent by Mr. A. Bennett Wilson; and the *Orthopedic and Prosthetic Appliance Journal* and the monthly *AOPA Almanac* sent to me regularly with other educational materials by the good offices of Mr. Lester Smith.

At the end of 1961 the public health department granted an important budget for an adjudication of prostheses for war and poor amputees for the following year.

In Lebanon all the amputees take advantage of the subvention of the government for the supply of prostheses, except the rich class (very few in number) who can afford and prefer to go to Europe.

The main condition for having the adjudication was to offer the lowest prices. I was determined to have it, and I did, because of the very low prices I gave, even though they are still higher than the prices in Europe and the U.S.A.

My main purpose in having the contract was to accumulate experience with my new machines and set-ups, as well as to train the three people working with me. In 1962 the following prostheses were made:

- 50 B.K. (40 government, 10 private)
- 10 A.K. (8 government, 2 private)
- 9 B.E. (7 government, 2 private)
- 5 A.E. (4 government, 1 private)

This can be considered a record number that a prosthetic facility has ever done in Lebanon or in the Middle East during one year. To this can be added about 20 long and 25 short leg braces with 3 scoliosis braces of our design and 3 Milwaukee braces.

I am convinced that the more you meet new cases the more experienced you become. I say new cases because nine out of ten amputees were operated on by surgeons who were not orthopedic surgeons, so they have

very irregular and unshaped stumps. An amputee would draw his gun on you, however, if you advised him the operating room.

Now things have changed and I have great faith in the future. We have about twelve orthopedic surgeons, all of whom have specialized either at Northwestern University in Chicago, New York University, or in France or England. A cooperation between the orthopedic surgeon or physician and the prosthetist or orthotist has started. But there is still a lot to be organized in Lebanon both in private and in government hospitals.

I think everything must be done to prevent any patient from going away or refusing help, and we should insist on giving reasonably cheap prices in order to get acquainted with numerous new cases. I may be harming my competitors with my low prices, but, as I mentioned, we are only three in Lebanon, and the two others are working at very good salaries in hospitals.

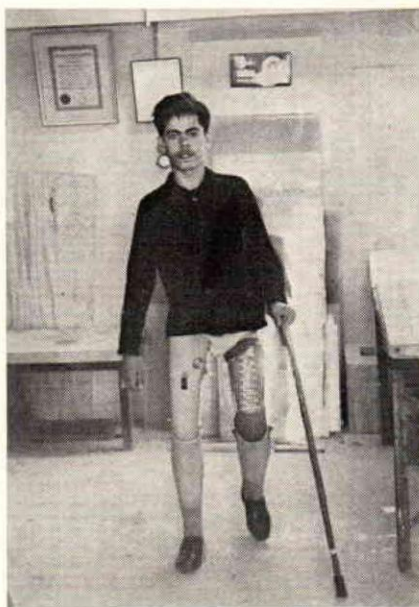
I beg all my colleagues who read these lines to send me their new ideas, books, inventions, or manuals in the orthopedic and prosthetic line, which will be most helpful to the disabled and crippled of our country.

It has been found and asserted that:

1) To attribute help for under-developed countries is our biggest actual need.

2) The lack of qualified technicians constitutes a big problem. Insufficient staff and material and scarcity of research teams, training possibilities, and especially the need of good organization constitute other difficulties which prevent adequate orthotic and prosthetic services.

3) Many attempts already have been made by the United Nations and other organizations to establish prosthetic and orthopedic services. The



My youngest bilateral 15-year-old amputee. He lost his legs when he was 3 and was fitted only last year by the government subvention, 12 years after his accident. He is doing fine, goes to school and sells (walking in the streets) lottery tickets during the summer vacation.

actual situation of these attempts must be examined by qualified people to determine the strong and weak sides of the services, so that remedy is available in case of failure. This is the true and particular case in Lebanon.

4) The financial problem of such an undertaking must be solicited to the administrations of the Technical Assistance of the United Nations, the World's Veterans Administration, the International Society for the Welfare of Cripples, and to other interested foundations.



This is a combination of Barr-Buschenfeldt and our design. The result is good but not as quick as the Milwaukee brace; the latter being hardly accepted by the parents because of the bulky shape: but excellent improvements have been noticed with the few Milwaukee braces I have made.