

IN THE SPOTLIGHT

Osteopathic Neuromusculoskeletal Medicine Residency Program: From a Resident's Perspective

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I have been around Prolotherapy for over half my life. Through high school and before my undergraduate education, I worked as a lab tech and medical assistant at Caring Medical in Oak Park, Illinois, and assisted in many medical missions that incorporated Prolotherapy into the basic patient care. I also had the opportunity to work with some excellent osteopathic doctors who integrated their knowledge of the human body, palpation and manipulation skills, and their osteopathic medicine philosophy, with Prolotherapy to treat many musculoskeletal problems. When I applied to medical schools, I decided I wanted to have the philosophy of medicine and training that the osteopathic schools provided. Through medical school, I continued to enjoy working with musculoskeletal problems and directed my focus toward that type of patient, particularly enjoying the use of manipulation to care for these problems. During these years of training, I determined that there were at least a few specific modalities I wanted to become very proficient in using for the future. Two of those treatment types were osteopathic manipulation and Prolotherapy. I also wanted to receive more extensive training in the anatomy and physiology of the human body and focus on learning how to improve the function of a person from a neurological and musculoskeletal perspective. As I looked into residencies, I wanted something that would help me get that training, and allow me to continue developing my skills in manipulation, and also study Prolotherapy. I was led to, what I feel is the best fit for my specific requirements: a Neuromusculoskeletal Medicine residency.

Neuromusculoskeletal Medicine (NMM) residency programs are relatively new and they are uniquely osteopathic. They are sometimes referred to as Neuro-musculoskeletal Medicine/Osteopathic Manipulative Medicine (NMM/OMM) programs because of the extensive training and specialization in manipulation. There are only a handful of programs, mostly small, with only a few residents per year at most.

There are several other ways to obtain similar training, including plus-one fellowships that may be performed after other residencies or a combined Family Practice/Neuromusculoskeletal Medicine residency (FP/NMM). NMM/OMM is one of 18 medical specialties recognized by the American Osteopathic Association (AOA) Bureau of Osteopathic Specialties (www.osteopathic.org). NMM/OMM specialists are board certified through the American Osteopathic Board of Neuromusculoskeletal Medicine (www.aobnmm.org).

The Neuromusculoskeletal Medicine residency (NMM) at Michigan State University (MSU) is part of the Michigan State College of Osteopathic Medicine, and is under the direction Lisa DeStefano, DO. (See Figure 1.) It is a two year residency, following a general medicine rotating internship. The residency prepares well rounded physicians to practice and teach musculoskeletal medicine, with emphasis on Osteopathic Manipulative Medicine (OMM). A normal week is divided into three main parts,



Figure 1. Peter Blakemore, DO with his primary attending physician and residency director, Lisa DeStefano, DO.

with three to four half-days of direct patient care in the clinic: two half-days of teaching in the medical school, and two whole days devoted to the resident's educational rotations. As a resident, I treat and follow my own patient load, usually starting as new patients. I manage the patient's care personally. The clinic is an osteopathic manipulation specialty clinic and most of our patients come with musculoskeletal or pain complaints. (See Figure 2.) The clinic has two to four residents, and approximately 10 physicians, most of whom also teach in the college of osteopathic medicine. All the attending physicians are specialists in manipulation, and some have additional specialty training. Whenever residents are seeing patients in the clinic, there is an assigned attending physician on site to supervise, and give instruction and advice as needed. All patients are presented to the attending physician, and as a new resident, there is involvement with each patient by the attending. This personal involvement from the attending physician gradually changes through the residency as the resident becomes more competent, so that by the end of the program the resident will be

comfortable and competent to see all their patients without supervision. There are some injection treatments performed at the clinic, including trigger point injections, but at present, patients who require Prolotherapy are usually referred out to another Prolotherapist. Through the residency program, though, we are planning to begin treating our own patients with Prolotherapy in the very near future.

The environment is very conducive to learning by requiring the resident to personally take the responsibility for the patient while incorporating a teaching atmosphere for instruction as needed. The situation is also extremely beneficial to the patient because the resident usually has more time to devote to each patient than the attending physician would be able to give, and the patient's care is directed through a combination of the resident's fresh perspective and the attending physician's advanced experience and counsel.

The second main division of time in a normal week is devoted to teaching in the college of osteopathic medicine. (See Figure 3.) The medical students spend their first two years of school on site at the campus during their preclerkship portion before doing their clinical years. In addition to the complete medical school curriculum of basic sciences and applied medical sciences, osteopathic physicians are trained to use their hands for diagnosis and treatment with osteopathic manipulation. Through the NMM residency at MSU, the resident's are involved in teaching Osteopathic manipulation to the students. This teaching ranges from being a small group instructor for 10-15 students to personally teach the students the practical portion of the manipulation curriculum to giving complete lectures to the entire 250 student class.

During two full days of a normal week, the NMM resident is also involved in a rotation schedule to continue his/her own training in allied fields to better understand disease processes and produce a competent, well-rounded doctor. These rotations include specialties like rheumatology, physical medicine and rehabilitation, radiology, sports medicine and neurology. The research portion of the residency is also performed using the rotation schedule. There are also elective rotation blocks that can be used to personalize the resident's education in specific areas of interest. The electives may be performed in the normal rotation schedule of two days per week or there are allowances to do devoted rotations where an entire month



Figure 2. Dr. Blakemore examining a patient.



Figure 3. Dr. Blakemore teaching a group of medical students.

is spent on a rotation. In that case, the patient and teaching responsibilities may be waived so the resident can spend a significant amount of time in that area of study and, if necessary, travel to a distant site for the rotation.

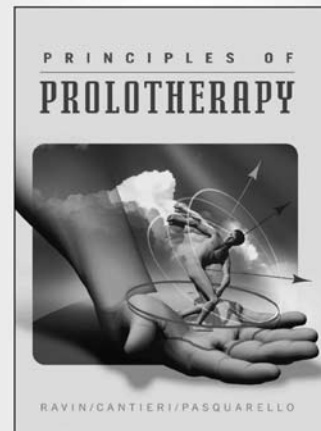
In my case, I have used one of my electives to do a devoted Prolotherapy rotation. I spent a month working with Mark Cantieri, DO in Mishawaka, Indiana. Dr Cantieri is a specialist in Osteopathic manipulation and Prolotherapy and treats primarily musculoskeletal problems. During that month I was able to apply myself in depth to the study of muscle firing patterns, biomechanics and ligament and tendon injuries and their relationships to the overall function of the patient. It was very helpful to study a practice type that uses an integration of manipulation, therapy and injections, including Prolotherapy, to treat musculoskeletal pain and dysfunction. Dr Cantieri is an excellent physician and teacher. His training was invaluable.

The residency at MSU also hosts other NMM and FP/NMM residencies, approximately once per month, to take part in a journal club and didactics that have a musculoskeletal and osteopathic manipulation focus. Other responsibilities include assisting in a student run free clinic where medical students see patients from the community and treat them using osteopathic manipulation at no charge and oversight of a research study using osteopathic manipulation to prevent the occurrence of stress fractures in athletes. In the stress fracture study, we have been following the MSU women's cross country team for a number of years, under the direction of Lynn

Brumm, DO, and have been developing a program of interventional manipulation to evaluate for and treat incorrect biomechanics to decrease the stress that is applied through the athletics. Thereby decreasing the incidence of stress fractures.

Overall, the Neuromusculoskeletal Medicine residency gives a good preparatory base to practice musculoskeletal medicine with a focus on improved function and decreased pain and gives the opportunity for an osteopathic physician to improve his diagnostic and manipulation skills and integrate the use of valuable procedures like Prolotherapy. ■

For more information about NMM/OMM residencies, visit the American Academy of Osteopathy (www.academyofosteopathy.org).



With more than 250 color photographs and 100 anatomical illustrations, Principles of Prolotherapy provides a comprehensive guide to the body's musculoskeletal anatomy as it pertains to the practice of Prolotherapy.

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