

Nuclear Medicine

“A Sit Down With Dr. Robert Henkin”

My major in college is nuclear medicine. In order to attain a better understanding of nuclear and the sciences that are applied, I conducted an interview with Dr. Robert Henkin, a seasoned radiologist, with over 30 years experience. Dr. Henkin serves on many governmental panels for numerous state and federal agencies. His experience has enabled him to make key decisions in the development of many new techniques, not only in the radiology field, but the medical field as well. Dr. Henkin has also published over 100 articles, and 2 textbooks used frequently at many universities around the world. He is 59 years old, and was past president at the American College of Nuclear Physicians at Loyola University Medical Center. I had several other questions for Dr. Henkin.

How and when did you choose nuclear medicine as your career?

I chose nuclear medicine in 1971, during my radiology residency.

What is nuclear medicine, and what purpose does it serve in the medical field?

Nuclear medicine is the medical specialty that uses radioactive drugs to study physiology of body organs and systems both in the normal and diseased states. In contrast to radiology, which primarily studies anatomy, nuclear medicine looks at physiology, or how things work. There are 10 million diagnostic nuclear medicine exams performed in patients each year and probably close to 100,000 therapeutic procedures each year as well. Nuclear medicine is used for diagnosis in cancer, heart disease, stroke, trauma and many other diseases. We also treat thyroid diseases, bone pain from cancer and several other less common diseases.

What advancements have been made in your tenure?

Since I have started in 1971, computers have taken a major role in nuclear medicine, enabling things such as SPECT topography and PET. New diagnostic and therapeutic agents have virtually changed this field from a curious corner in medicine to a major diagnostic and therapeutic specialty.

How long has nuclear medicine been a factor in the medical field?

Nuclear medicine goes back almost 75 years. However, it came into widespread use during the late 1960s and early 1970s. All acute care hospitals must offer these services available today.

What is the difference between receiving a B.A. as opposed to a master's degree in nuclear medicine?

A M.S. degree is not usually given in nuclear medicine. They are given in the basic science area such as physics, pharmacy or chemistry. Technologists may have a B.A. or an A.S. degree. Those with the B.A. are better equipped for advancements in the future, but do not in general have better technical skills.

What types of patients can one expect to deal with as a nuclear medicine technician?

Every type from newborns to elderly. Patients may have almost any type of disease known ranging from heart disease, and cancer, to trauma, kidney disease and infections.

What equipment is used on a daily basis?

Gamma cameras, computers, well counters, dose calibrators, treadmills, and IV solutions.

Considering the uses of radioactive materials, is radiology safe?

Many studies over the last 50 years have never shown that diagnostic nuclear medicine procedures have any adverse outcomes associated with them due to radiation. In general, a single nuclear medicine diagnostic procedure may be equal to the natural radiation one would receive if they lived in Denver for a year or two.

When dealing with radiology, how can one determine what isotopes are being used?

Nuclear medicine is not radiology. While many radiologists practice nuclear medicine, many non- radiologists do as well. The images look entirely different in nuclear medicine and they do not look like x-rays.

What are isotopes?

Isotopes may be radioactive or not. They have different mass numbers from their more common cousins. For example, oxygen normally has the mass numbers of 16. However, there is an isotope oxygen that has the mass number of 15. It happens to be radioactive, but not all isotopes are radioactive.

This concludes my interview with Dr. Henkin. After hearing his answers to my questions, I feel that I have come out with a better knowledge of nuclear medicine. I now know the differences between radiology and nuclear medicine. I enjoyed the interview with Dr. Henkin and this knowledge has greatly influenced my decision to continue in the field of nuclear medicine.

Interviewed by John Modzelewski for a College 101 assignment on 04/01.