

AbstractID: 11979 Title: Magnitude of Radiation Exposure to US population (NCRP report #160) with focus on CT dose

National Council of Radiation of Protection (NCRP) recently released a long awaiting report (NCRP report # 160) on the radiation exposure of the US population from various sources including medical exposure. This new report replaces the current NCRP report # 93 published in 1987.

According to the newly released NCRP report # 160 (March 2009), the medical radiation exposure to US population has increased by nearly 6 times compared to the previous NCRP publication (NCRP 93). The previous pie-chart published in 1987 (NCRP report #93) indicated contribution of 3 mSv from background radiation, 0.53 mSv from medical exposure and 0.07 mSv from other sources (consumer products, occupational and other sources) exposure while the new pie-chart published in March 2009 (NCRP report #160) indicates contribution of 3.1 mSv from background radiation and **3.0 mSv from medical** and 0.1 mSv from all other sources (consumer products, occupational and other sources).

The largest contributor to the collective dose to US population is from CT and Nuclear Medicine. CT scanning has increased nearly 10-11% annually in the US in the past two decade. The number of CT procedures has increased from 3 million CT scans in 1980 to more than 69 million CT scans in 2007.

The purpose of this talk is to provide an overview of the newly released NCRP report #160. As a member of the NCRP scientific committee 6-2 that developed the above report, the author will also focus on the medical radiation exposure including CT.

Learning Objectives:

1. To become familiar with the NCRP report number 160.
2. To learn about the various sources and magnitude of radiation exposure including medical radiation exposure to US population
3. To familiarize with the types and distribution of medical imaging procedures in US.
4. To examine the various aspects related to CT use and CT dose