

During the war years, Evans continued his work on the dial painters, with emphasis on their safety. Two papers appeared on safety and housekeeping in the dial painting plants (Evans 1943; Morris et al. 1943). In addition, Evans was involved in a study of the effects of radium administered to laboratory animals. Using the rat in an attempt to imitate human radium poisoning, Evans et al. (1944) studied the effects of internally deposited radium. They found that, per unit body weight, 150 times as much radium was required to produce particular chronic symptoms in the rat as in man (or 250 times, expressed as the ratio of radium to calcium in the skeleton). The authors observed that "the tolerance values in animals may be interesting where there is an absolute lack of observations on man, but even a few measurements on man must be regarded as overwhelmingly more important in determining the tolerance dosage for man than the most elaborate experiments on animals." Readers familiar with Evans will recognize this finding as a basis for his often-quoted statement that "the proper subject for the study of man is man" (Evans 1981).

With the conclusion of the war, the interest in the radium cases increased even as the wartime needs for radium dials diminished. The development of atomic energy implied that employees in the nuclear industries might risk incorporation of alpha-emitting radioelements into their bodies. Thus, the potential risks from the low levels of radium in the survivors of the early radium industry were of considerable interest.