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PAPER TITLE RADIATION EXPOSURE AND PROTECTION OF CHILDREN IN X-RAY
DIAGNOSTICS OF RESPIRATORY TRACT

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ABSTRACT (See instructions overleaf)

The ever increasing exposure of population to irradiation because of X ray diagnostics of respiratory tract is not always followed by an adequate radiation protection measures. According to the well known radiobiological law, young organisms are more sensitive to radiation than adults. Therefore, in agreement with the recommendations of WHO, and UNSCEAR, special care has to be taken in radiation protection of children.

The basis for radiation protection is the exact knowledge of doses. The patient dose determination in X ray diagnostics is not a simple task. The dose depends from the kind of examination, the technical condition of the equipment, the way and method of exposure, the patient itself and from the accuracy and precision of dosimetric system. Even with a well calibrated dosimetric system, good statistics of measurements is needed for patient dose estimation. We measured the dose on 45 patients divided in 5 age groups. The dose was determined on the back, the breast, the thyroid, the armpit, the left eye and the gonade region. Similar measurements were also carried out in sinus examination of a group of children.

On the basis of the dose measurement results the risk of some cancerous and genetic hazards was estimated.