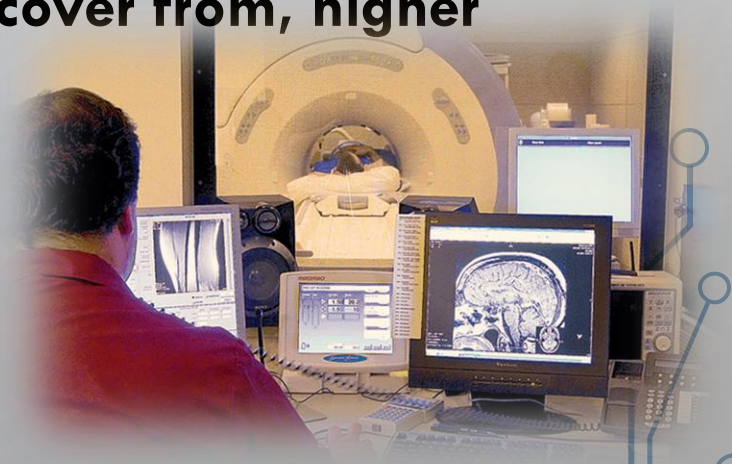
EARLY EFFECT (ACUTE RADIATION SYNDROME AND LETHAL DOSE)

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WHAT IS EARLY SOMATIC EFFECT?

Early somatic effect is when a physical, biological change that occurs after a person received a high dose of whole body ionizing radiation delivered after short period of time causing damage to the person; often appearing hours after to weeks after receiving radiation on high quantities . Lower doses of radiation your body can recover from, higher doses are lethal and can lead to severe illness.





EARLY SOMATIC EFFECTS OF RADIATION/ ACUTE RADIATION SYNDROME

Physical effects

Severe physical effects that occur after receiving a high dose, such as redness to the skin, nausea, fatigue, hair loss, and in extreme cases can cause Organ damage and even death. These only occur above a certain radiation dose. Around 3-4 Gy can cause radiation poison. The dose of Gy generally occur from a source outside the body.

Acute radiation syndrome:

Also known as ARS, is a radiation sickness or radiation poisoning; it is a severe illness caused by exposer to high dose of ionizing radiation within a short period of time.

Symptoms: nausea and vomiting (emesis) , more severe case bone marrow suppression, headache (Cephalia), diarrhea, hairloss, potential damage to internal organs and blood cells.

WHERE/ HOW YOU CAN GET EFFECTED



Getting effected by ARS can occur accidentally or intentionally, most likely from a nuclear accident, nuclear weapons, or nuclear emergency, not from medical procedures such as medical imaging nor radiation therapy.

The cause of death in most cases is the destruction of the persons bones marrow results in infection and internal bleeding becoming lethal.

ARS 3 SEPARATE SYNDROMES

1. Hematopoietic syndrome:

Hematopoietic syndrome is a form of ARS caused by severe damage to bone marrow stem cells from the whole body exposer. It causes a reduction of white and red blood cells as well as platelets, being more susceptible to hemorrhage and infections.

2. Gastrointestinal syndrome

Form of ARS that can be potentially lethal outcome from high dose radiation. Death happens in 3-10 days; death occurs mostly due to severe damage to cells that line the digestive system

3. Cerebrovascular syndrome:

A severe form of radiation syndrome caused from high ionizing radiation typically 50 Gy. Leads to the central nervous system and cardiovasculare collapse. Death caused by elevated fluids levels in brain, increases intracranial pressure, death can happen within several hours to 2-3 days.



WHAT TO DO IF EFFECTED BY EARLY SOMATIC RADIATION?

Seek treatment; reducing and treating infected areas can help reduce the infection. Maintaining hydration to replace fluids and electrolytes lost due to acute radiation syndrome effects from vomiting and diarrea. There is no full expected recovery.

WORKS CITED

- http://en.m.Wikipedia.org/wiki/Acute_eadiation_syndrome.ca
- https://my.clevelandclinic.org