



RADIOACTIVE

LYRICS AND CHORDS



Verse 1:

C
In the middle of every atom you'll find a nucleus which will be made,
G **C**
Of protons and neutrons that strongly bind, and most nuclei never will change.
But large nuclei that are bigger than lead can't hold all their protons in place,
And some rare isotopes have too many neutrons, or not enough, for them to be stable,
F **C**
They may decay, and radiate particles or high energy EM waves,
F **G**
As their nucleus changes, they change their name as their atomic number does not stay the same.

Chorus:

C
Unstable nuclei randomly decay,
Dm
Spit out an alpha or a beta then emit a gamma ray,
G
They may be dangerous, (watch out!) but we use them every day, yeah.
C
Radioactive r-radioactive.

Verse 2:

Alpha's a helium nucleus, with a charge of plus 2, and it's slow,
It won't penetrate paper or skin but that makes emitters more dangerous if they are swallowed.
Betas are just fast electrons emitted when neutrons decay so beware,
They can get through your skin, ionise you within, but aluminium can shield you if you're prepared.
Gamma rays may not be so ionising, but they go through most things in their way,
You'll need about one inch of lead to protect all your cells from the rays that may go astray.

Chorus

Bridge 1

C **Dm**
Ooooh, small amounts can be found almost everywhere,
G **C**
Radiation can come from food, rocks or space, from nuclear waste and breathed in from the air,
Ooooh, this is normal but too much exposure can leave you unwell,
If contaminated you'll be irradiated from within causing cancer or killing your cells.

Verse 3:

Alpha emitters are in smoke detectors and saving lives all of the time,
Beta emitters will measure the thickness of paper or foil in a factory line,
Doctors, inject you with gamma emitters, to track stuff that's flowing inside,
If you have a tumour, they may kill it with gamma rays, so that they don't have to cut you with knives.

Chorus

Bridge 2:

Oooh becquerels or decays every second, are activity,
It decreases with time, as fewer unstable nuclei are left to decay randomly,
Ooh half-life is the time for it to go down by half naturally,
For some isotopes this will be seconds or millions of years if they have more stability.

Chorus

