

ICNIRP Guidelines for Limiting Exposure to Electromagnetic Fields (100 kHz – 300 GHz)

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Why are we interested in RF Guidelines?

- The effect of RF on human health varies greatly depending on a range of factors
- For example
 - It has no effect at low levels
 - But can harmful at high levels

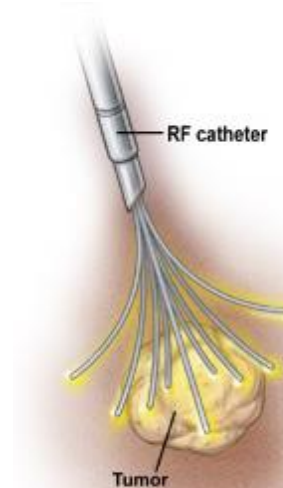


Why are we interested in RF Guidelines?

- There are also many important benefits that RF brings
- For example
 - Telecommunications (commerce, leisure, financial security)
 - Medical, industrial, domestic utility



RF Ablation



MRI Scans



Why are we interested in RF Guidelines?

- Guidelines provide a set of rules to avoid unsafe RF exposures, without unduly limiting beneficial uses of RF



What is ICNIRP?

- Not-For-Profit Non-Governmental Organization in official relations with World Health Organization & International Labour Organization
- To develop and disseminate science-based advice on limiting exposure to non-ionizing radiation
- Independent from industry; members declarations of interests available at www.icnirp.org
- Guidelines are the main source of ICNIRP advice

**What sort of protection do
the guidelines provide?**





What do the ICNIRP Guidelines protect against?

- All RF EMF exposures
 - From instantaneous through to 24/7 exposures
 - From localised to whole body exposures
 - Young, old, healthy & unwell people
 - Any adverse health effect (regardless of mechanism)

Current Radiofrequency EMF Guidelines

- ICNIRP 2020 www.icnirp.org/cms/upload/publications/ICNIRPrfgdl2020.pdf
- First update since ICNIRP 1998

Differences between ICNIRP 2020 & ICNIRP 1998

- ICNIRP 1998 provides safety for exposures that are currently used
- BUT there were gaps that new technologies could potentially exploit that could result in harm
 - Brief duration, localised exposures over circa 30 GHz
 - Long duration, whole body exposures over 6 GHz
 - Ambiguity regarding the use of reference levels
- These have been remedied
- Substantial improvements in terms of transparency, rationale behind protection, and rules for multiple exposures