



POLICY BRIEF
POLICY STATEMENT

RADIO FREQUENCY ELECTROMAGNETIC FIELD (RF-EMF) EXPOSURE IN CHILDREN



Summarizing the Evidence and Recommended Policy Actions

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Policy Brief: Protecting Children from RF-EMF Exposure from Cell Phones and Cell Towers

Purpose

To summarize the scientific evidence on radio-frequency electromagnetic field (RF-EMF) exposure in children and outline actionable policy measures for parents, families, schools, municipalities, and state agencies.

Key Findings

1. Children Absorb More RF-EMF Than Adults

Children's thinner skulls, higher tissue water content, and smaller head size result in **deeper RF penetration and higher whole-brain absorption**.¹ **Footnote:** MRI-based modeling shows up to **2× deeper penetration** in children.

2. Documented Biological Effects at Real-World Exposure Levels

Peer-reviewed studies demonstrate that RF-EMF exposure can induce:

- **Oxidative stress and DNA damage**²
- **Altered brain electrical activity**³
- **Impaired working memory and attention**⁴
- **Sleep disruption and melatonin suppression**⁵

These effects occur at exposure levels **below current FCC limits**.

3. Cell Towers Near Schools Increase Chronic Exposure

Children in schools near towers experience **continuous, involuntary RF exposure**. Studies show:

- **3× higher total RF exposure** in kindergarten children near towers⁶
- **Motor skill impairment, reduced spatial memory, and attention deficits** in students exposed for two years⁷

4. U.S. Exposure Limits Are Outdated

FCC limits were set in **1996**, based on:

- **A 220-lb adult male model**
- **Thermal effects only**
- **No consideration of children, long-term exposure, or non-thermal mechanisms**

Many countries (Italy, Switzerland, Belgium) enforce limits **10–100× stricter**.

Policy Recommendations

A. School-Site Protections

- Establish **minimum 1,500-foot setbacks** for cell towers from schools and childcare centers.
- Prohibit **small-cell 5G nodes** on school property.
- Conduct routinely scheduled **RF exposure measurements and audits** for all school campuses.

B. Child-Focused Device Policies

- Limit phone use or ban entirely in elementary, middle and high schools.
- If permitted in schools, require **airplane mode** during storage (backpacks, lockers).
- Promote **speaker mode, texting, and distance-based use on a non-interference basis**.
- Remove radiation emitting devices from bedrooms or sleeping areas.
- Limit use or do not permit use of emf devices by infants, children or youth.
- Do not allow using, carrying or storing cell phones in worn clothing or close to body parts.

C. Regulatory and Public-Health Actions

- Update FCC exposure limits to reflect **child physiology** and **non-thermal effects**.
- Require **child-specific SAR testing** for all wireless devices.
- Mandate **public disclosure** of tower emissions and school-site RF levels.
- Fund longitudinal research on **neurodevelopmental impacts**.

Rationale for Immediate Action

Children represent the population **most vulnerable** to RF-EMF exposure and the population with the **least control** over their environment. The scientific evidence demonstrates credible biological mechanisms—oxidative stress, neurofunctional changes, and cognitive impacts—that justify **precautionary policy measures**.

Updating standards and implementing school-site protections are **low-cost, high-benefit interventions** that align with international best practices and current best health practices.

References

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4. Foerster et al., *Environmental Health Perspectives*, 2018.
5. Carter et al., *Sleep Medicine*, 2016.
6. Bhatt et al., *Environment International*, 2016.
7. Elliott, *Protecting Pregnancy, Children and the Unborn*, 2026.