# Massachusetts for safe теснногосу Wireless Technology Risks & Safer Solutions

Lori Schreier, Deb Hodgdon, Jennifer White, New Hampshire for Safe Technology Cece Doucette, Massachusetts for Safe Technology

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### Cece Doucette, MTPW

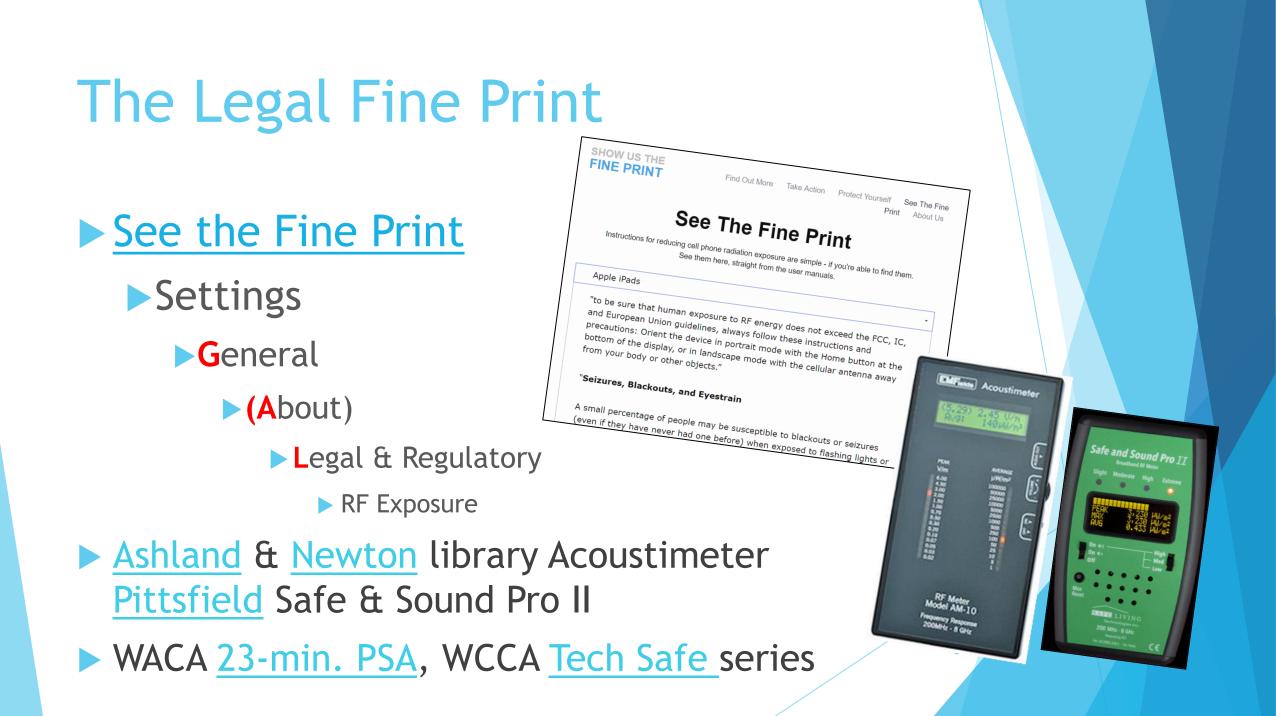
- Helped Ashland, MA become first-in-nation with <u>Best Practices for Mobile Devices</u>, 2014
- Introduced <u>legislation</u> in MA & testified in NH
- Co-founder, <u>Wireless Education</u>, educational non-profit
- Co-founder, <u>Massachusetts for Safe Technology</u>
- Co-Chair, Technology Panel, Health in Buildings Roundtable Conference @ NIH
- Speaker: EMF Medical Conference 2021



#### **Best Practices for Mobile Devices**

- Turn off the device when not in use.
- \*Turn wifi on only when needed.
- Always place the mobile device on a solid surface.
- Viewing distance should be a minimum of 12 inches from the screen.
- Specific product information guides are available by request through the IT Department.

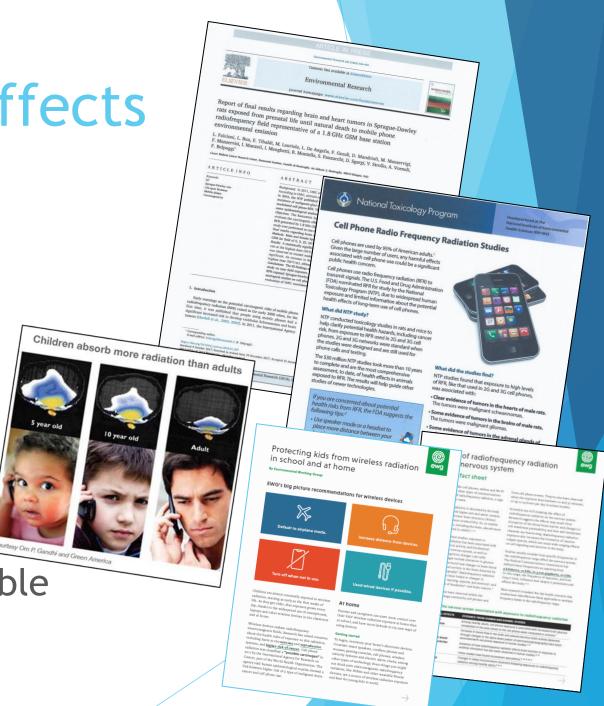




# Science: Long-term Effects

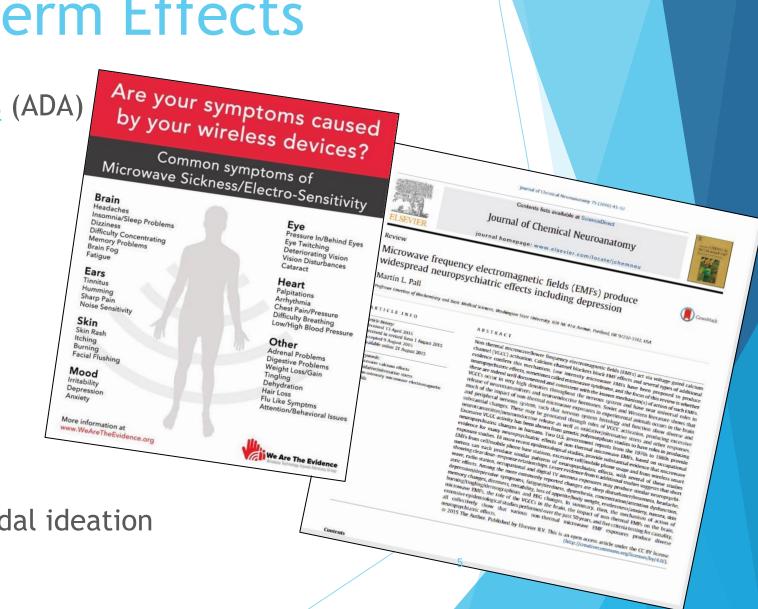
- Child & Adult Cancers
- DNA Damage
- ► <u>Infertility</u>
- ► <u>Neurotoxicity</u>
  - > ADD/ADHD
  - Autism
  - > Alzheimer's
  - EWG Fact Sheets

Children are especially vulnerable



### Science: Short-term Effects

- Electromagnetic Sensitivities (ADA)
  - Insomnia
  - Headaches
  - Nosebleeds/earbleeds
  - Fatigue
  - > Pain
  - > Skin abnormalities
  - > Irregular heartbeats
  - Cognitive impairment
  - > Anger, behavior issues
  - > Anxiety, depression, suicidal ideation



### Science: Planetary Impact

- Pollinators
- Birds
- Energy consumption
  - > Mineral extraction
  - > Data warehouses
  - > Networks
  - Personal devices
    - Streaming
    - Send/receive
    - Charging
    - Continuous app updates



# Why Don't We Know?

- ► FCC: Captured Agency
- ProPublica Article
- ► FDA: Conflict of Interest
- World Health Organization
  - Reopening investigation
  - Conflicts of interest



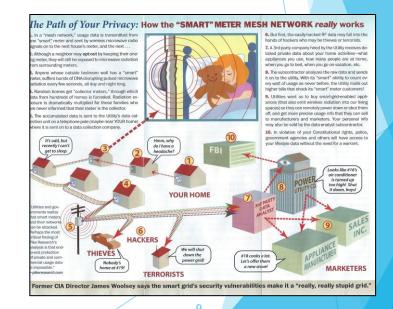
### What Safe Technology Looks Like



#### Source: Utility "Smart" Meters

- Pulse radiation continuously
- Can hop on house wires/pipes
- Fires, explosions, improper grounding
- Data harvesting, privacy issues
- Leading cause of sudden onset microwave sickness
- Environmental justice/<u>Worcester</u>
- TedX Talk: Jeromy Johnson, engineer
- TedX Talk: Dr. Alexia McKnight



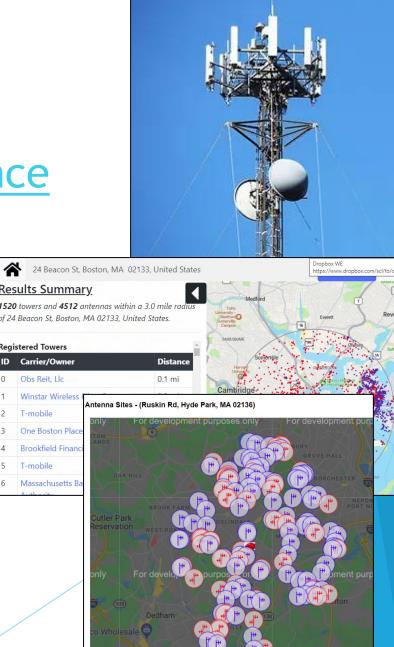


#### Source: Cell Towers

Examine the <u>non-industry funded science</u>

#### AntennaSearch.com

Understanding EMFs Search this site		Results Summar 1520 towers and 4512 and of 24 Beacon St, Boston, N
Navigation Introduction The Science	Cell Towers	Registered Towers ID Carrier/Owner
Military Experts Doubts Cancers	Cell Tower Scientific Studies	0 Obs Reit, Llc 1 Winstar Wireless I
Infertility Impact on Children	The following studies indicate cell towers are <b>biologically hazardous</b> :	2 T-mobile 3 One Boston Place
Wi-Fi in Schools Electrohypersensitiv (EHS)	<ul> <li>Report of final results regarding brain and heart tumors in Sprague-Dawley rats exposed from prenatal life until natural death to mobile phone radiofrequency field representative of a 1.8 GHz GSM base station environmental</li> </ul>	4 Brookfield Financi 5 T-mobile
Utility "Smart" Meters Cell Towers 5G & IoT	emission from the Ramazzini Institute in Italy concludes, "The RI findings on far field exposure to RFR are consistent with and reinforce the results of the <u>NTP study</u> on near field exposure, as both reported an increase in the incidence	6 Massachusetts Ba
Planetary Impact Legal Issues	of <b>tumors of the brain and heart</b> in RFR-exposed Sprague-Dawley rats." This study, partially funded by the U. S. government, is the first large-scale study to show clear evidence of cancer risk from cell towers.	
Manufacturers For Health Care Providers For Engineers & Physicists For Municipal Leaders	<ul> <li>Epidemiological evidence for a health risk from mobile phone base stations finds "adverse neurobehavioral symptoms or cancer in populations living at distances &lt; 500 meters from base stations." (1,640 feet)</li> </ul>	
Media Limitations World Response Solutions Massachusetts EMF Bills 2019-20	<ul> <li>Association of Exposure to Radio-Frequency Electromagnetic Field Radiation (RF-EMFR) Generated by Mobile Phone Base Stations with Glycated Hemoglobin (HbA1c) and Risk of Type 2 Diabetes Mellitus indicates, "It is concluded that exposure to high RF-EMFR generated by MPBS is associated with elevated levels of HbA1c".</li> </ul>	



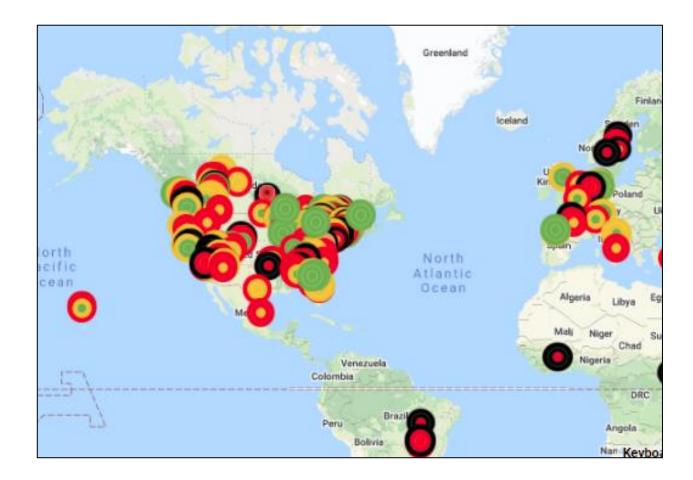
### Now Add 5G Small Cells

#### <u>5<sup>th</sup> Generation technology</u>

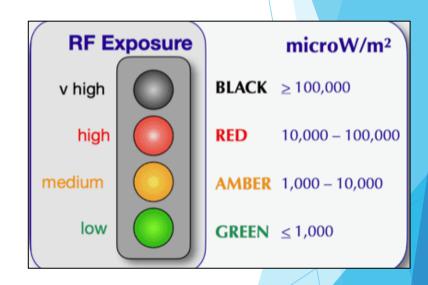
- Promises faster entertainment downloads, smart cities, etc.; <u>buying the entertainment industry</u>
- Uses existing 3G, 4G wavelengths to penetrate buildings, can't go through objects
- **5G** is the *addition* of short millimeter waves
- Industry goal: millions of small cells at curb outside bedrooms in public access way, every 2-12 houses
- Clear-cutting trees
- Never tested for safety (<u>Congressional hearing</u>)
- ComputerWorld: <u>5G a Bad Joke</u>
- Verizon exposed <u>100 million January 2022</u>
- Rubik/Brown paper: Evidence for a connection between coronavirus disease-19 and exposure to radiofrequency radiation from wireless communications including 5G



#### **Global EMF Monitoring Project**



#### **Outdoor Exposures**



Salzberg Guidelines https://globalemf.net

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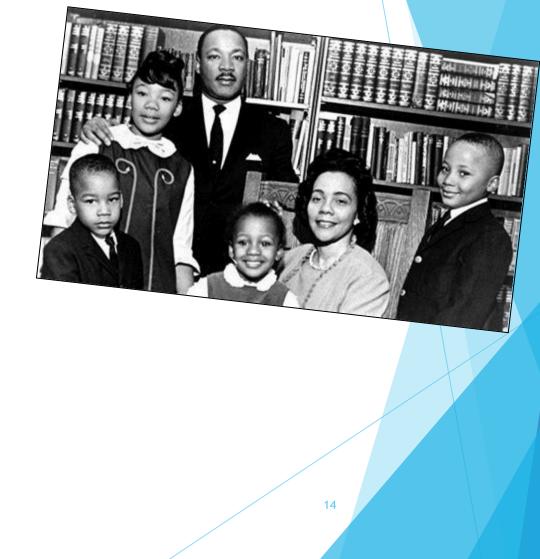
#### **Outdoor Measurements**

- Goal: Less than 1,000 microwatts/square meter
- Westmoreland, NH Fire Department = 417
- Keene, NH = 7,460
- Nashua, NH = **14,500**
- Concord, NH = 66,600
- Stratham, NH = 108,000
- North End Boston = 613,000



### Social Norm Change

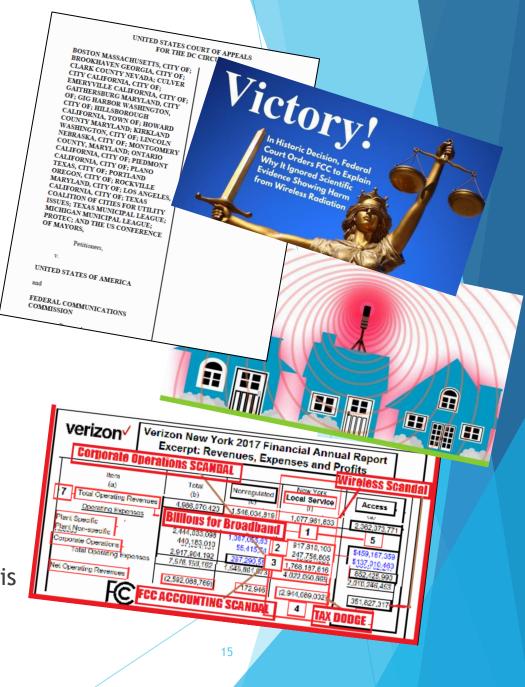
Martin Luther King, Jr.
Public engages
Courts rule
Public policy enacted



# Legal Solutions

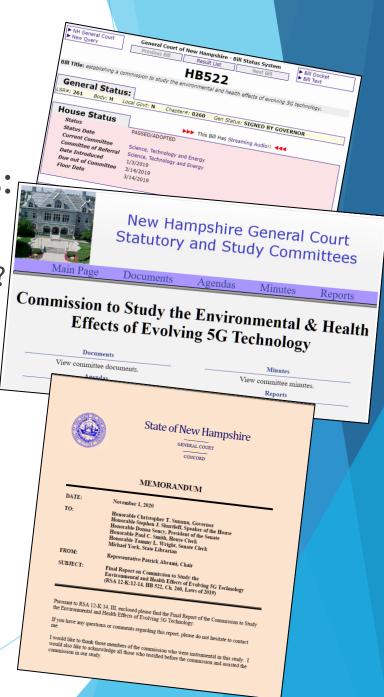
#### FCC Sued:

- Environmental Health Trust
- ► IRREGULATORS v. FCC
- Murray v. Motorola
- FDA Petition: <u>Americans for Responsible Technology</u>
- MA Board of Health Legal Guidelines:
  - BoH legally empowered to protect health
  - Pittsfield, MA BoH to Verizon: <u>cease and desist order</u> & <u>citizen lawsuit</u> with CHD
- Fay School ADA: <u>Court recognizes</u> <u>non-thermal biological effects</u> for the first time
- EHS: <u>California Appellate Court</u> holds that Wi-Fi sickness is a disability
- Many other <u>lawsuits</u>



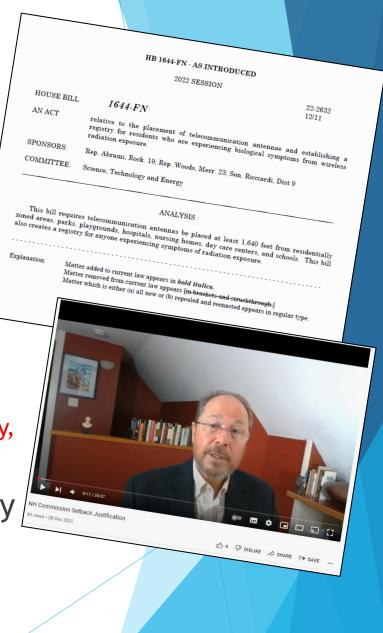
### Leading Policy Solutions

- NH Rep. Patrick Abrami -- very pointed questions:
  - Why has the insurance industry put in RF exclusions?
  - Why does legal fine print say keep distance from the body?
  - Why are 1,000s of peer-reviewed studies ignored by FCC?
  - Why do FCC exposure limits not account for the nonthermal, non-ionizing, biological effects?
  - > Why are **US limits 100 times higher** than other countries?
  - > Why is the **cumulative effect** of increasing EMFs ignored?
- New Hampshire 2019 law in less than a year, groundbreaking <u>Commission Report</u> a year later
- Presentation by UNH <u>Dr. Kent Chamberlin w/slides</u>



#### 2022 NH Bill

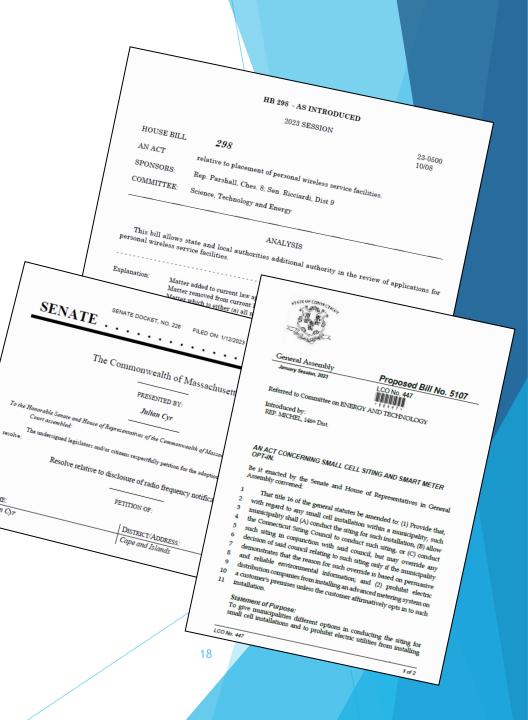
- 2022: NH Rep. Patrick Abrami
  - ▶ <u>HB1644</u>, Bi-partisan
  - 1,640' Setback (500 meters), registry of harm
- Presentation by UNH <u>Dr. Kent Chamberlin w/slides</u>
- Frank Clegg, Retired President Microsoft Canada <u>testimony</u>: "Wireless technology is no longer advanced technology, it has outlived its useful life as a main source of connectivity"
- House Committee on Science, Technology and Energy vote 15:3 to introduce new legislation in January



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#### 2023 Bills

- NH <u>HB.298</u> State & municipal control
- ► ME LD 697 Birds, bees insects and children
- CT <u>HB-5107</u> Small cells and smart meters
- MA Bills
  - S.155: Commission
  - <u>S.156</u>: Protect children from handheld devices
  - ▶ <u>5.316</u>: Schools
  - S.2152: Smart meter choice, emergency bill
  - <u>S.1044</u>: Civil rights
  - ▶ <u>H.2158</u>: EMS recognition, registry and reporting
- Bills in <u>Other States</u>



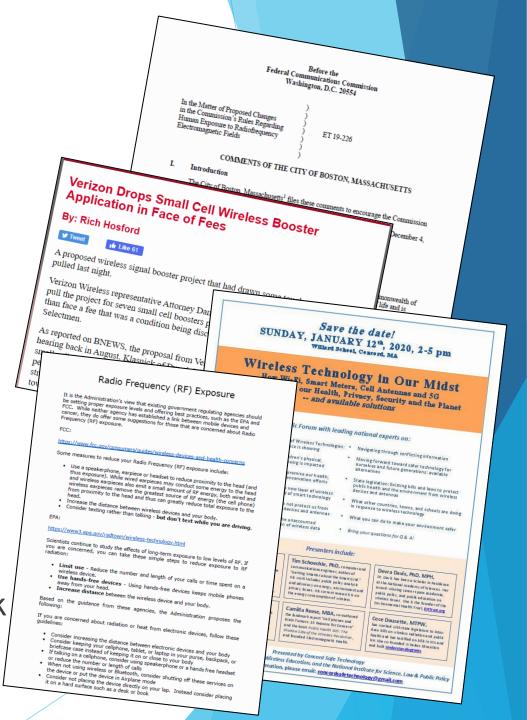
### **Public Taking Action**

- 150+ national groups
- Cell towers in MA
  - Shelburne, MA 1,500' setback in bylaw, 3,000' from schools
  - Wayland 900' setback in bylaw
  - Pittsfield Board of Health unanimous vote to issue Verizon cease and desist
  - Dover-Sherborn Regional won
  - Concord relocating tower
  - Petersham AT&T height waiver denied
  - Centerville Concerned Citizens @ Cape Cod
  - Holliston wireless antennas on power lines



### **MA Towns Taking Action**

- City of Boston files with FCC
- City of Boston sues FCC
- Burlington Small Cell Policy
  - National example with <u>Americans for</u> <u>Responsible Technology</u>
  - Bedford, Lincoln, Andover adopting Burlington
- Shrewsbury Board of Health
- Concord Expert Forum 300+
- Worcester schools RF statement
- Ruskin Road Neighborhood Forum, Hyde Park with Mike Lynch, Broadband & Cable Office



# **Public Servants Taking Action**

Easton, CT 5G moratorium
 Hawaii County bans 5G

► Worldwide actions



### **School Actions**

- New York Times: Silicon Valley execs banning screens from their children
- TechSafe Schools national program!
- Curriculum & Professional Development
- Wireless Education's <u>Schools & Families</u> on-line course
- Extensive printable resources at <u>Environmental Health</u> <u>Trust</u>
- Maryland first public health agency to recommend hard-wiring in schools, see <u>fact sheet</u>
- U.S. Collaborative for High Performance Schools <u>low-</u> <u>EMF best practices</u>
- Cyprus safety recommendations for study at home



# **Professional Solutions**

#### Health Care Training

- **EMF** Medical Conference & Letter
- EMF Textbook
- Physicians for Safe Technology

#### Engineers, physicists, technologists, architects, etc.

Clegg et al., <u>Building science and radiofrequency radiation: What makes</u> smart and healthy buildings, Building and Environment, 2019

PHYSICIANS

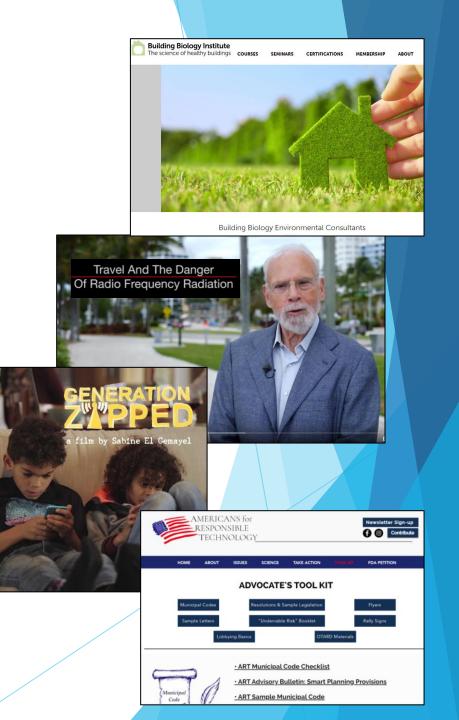
SAFE TECHNOLOGY

► Heroux et al., Cell Phone Radiation Exposure Limits and Engineering Solutions, Int. J. Environ. Res. Public Health, 2023

Silicon Valley engineer <u>Jeromy Johnson TEDx Talk</u>, additional info <u>for</u> engineers and physicists

#### Home & Work Solutions

- Building Biology Institute consultants
- Award-winning film Generation Zapped
- ▶ PBS Burt Wolf <u>1808</u> & <u>1809</u>
- Americans for Responsible Technology <u>Tool Kit</u>

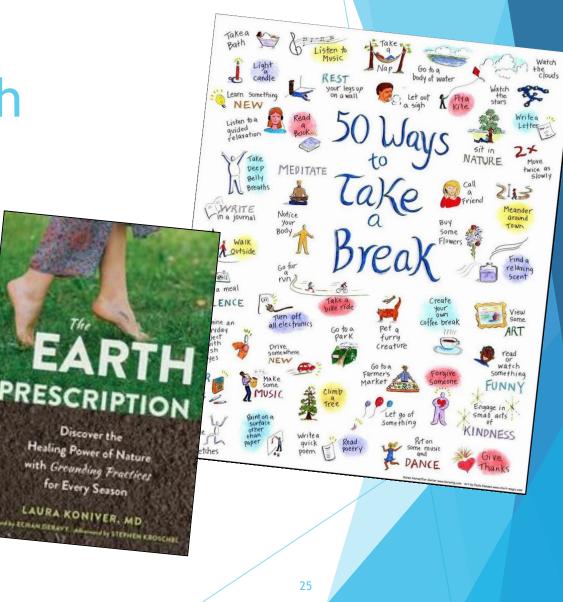


#### Safe Tech Solutions: Physical & Mental Health

Avoid excessive screen time

- Set limits for yourself and children
- Model good behavior
- ► <u>50 Ways to Take a Break</u>

► <u>The Earth Prescription</u>



#### Safe Tech Solutions: Municipal Level

- ALARA, As Low As Reasonably Achievable (CDC)
- Investigate:
  - Resources for <u>Municipal Leaders</u>
- Differentiate industry priorities vs. public's
  - Reinventing Wires: The Future of Landlines and Networks
- ► <u>Measure</u> vs. <u>biological effects</u>



#### **Next Steps**

- No safe level of EMF/RF
- Dr. Linda Birnbaum: Need state efforts
- Educate the public
  - Upcoming info sessions
  - Sponsor public/regional forums (<u>Tri Town Health Department</u>, <u>Hanscom Area Towns Selectboard</u>)
  - Train <u>schools & staff</u> on safe tech ASAP
  - Engage professional associations (Municipal, Schools, AFL/CIO, Nurses Assoc., Children's Alliance, etc.)

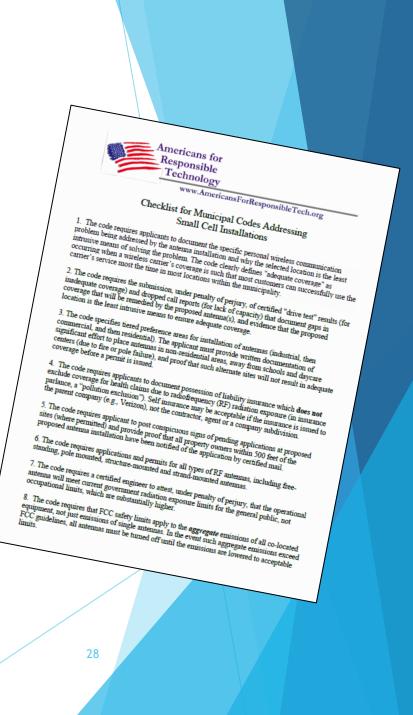


### Next Steps

#### Local:

- Form town-wide tech safety committees
- Offer no-fee "smart" meter opt-out
- Transition to hard-wired in public spaces
- Strengthen wireless communication facility by-laws: <u>Americans for Responsible</u> <u>Technology tool kit</u>

National Attorney <u>Andrew Campanelli</u>



## For Today

- Reduce your exposures
  - Notice what is radiating
  - Start with baby steps
    - Create a sleep sanctuary
    - Ethernet cables and adapters

STEP 1:

Route

Simple and Inexpensive Hardwiring Set-up

Shielded

Ethernet

Cable: Long @

\$30

Etherne

Switch

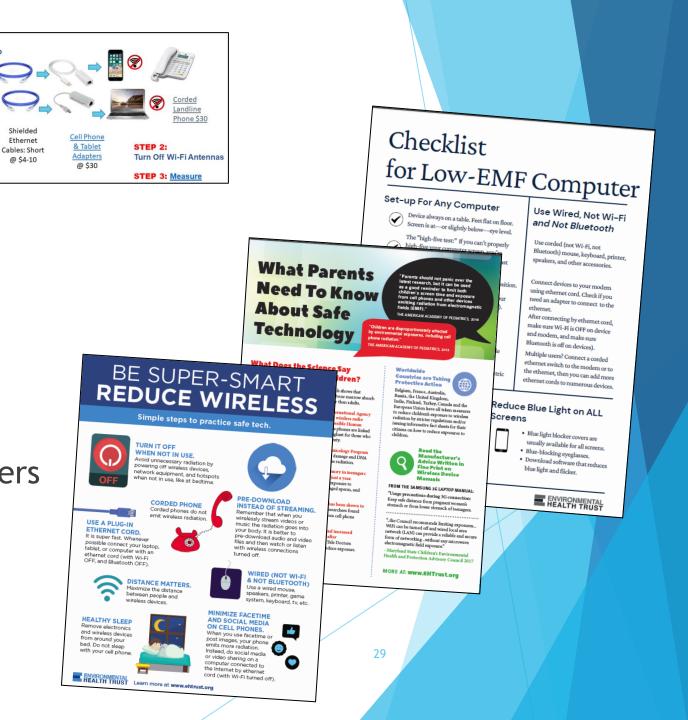
@ \$20

Shielded

Ethernet

@ \$4-10

- Choose airplane mode
- Environmental Health Trust Resources



#### Thank You!

- New Hampshire for Safe Technology
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