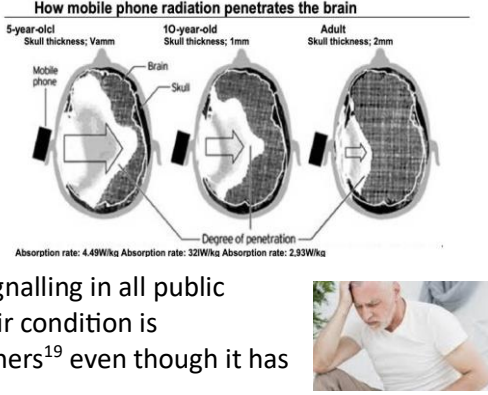
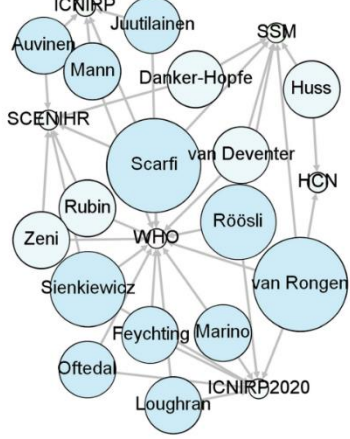


Understanding the link between wireless technologies and health

1		<p>Electrical impulses are essential for all life forces used in the bodies of humans and animals and used across the planet in nature and the weather. They are delicately balanced and often subtle in strength, but without them, life cannot continue¹.</p>																																																																		
2	<p>Light is part of the electromagnetic spectrum, and so are microwave signals used in telecommunications. However, these are man-made signals which are not found naturally in the earth's environment². Microwave wavelengths are maximally absorbed by humans, animals, insects and trees.</p>																																																																			
3		<p>Microwave signals used in telecommunications are found in the 'non-ionising' part of the electromagnetic spectrum, which goes from visible light down to radio waves.</p> <p>Non-ionising waves can interact badly with our bodies; for example, too much ultraviolet (UV) radiation causes sunburn³.</p> <p>5G millimetre waves sit next to infrared light, which penetrates the skin into nerves and tissue and can help heal the body in small doses. However, at the longer 24/7 exposures of today, 5G beams may damage skin, organs and the nervous system^{4,5}; see 5G expert opinion video here.</p>																																																																		
4	<p>Non-ionising waves are used for 3G, 4G and 5G wireless. They are complex, spiked and pulsed.</p> <p>They impact the body and cause many bioeffects, including many current health conditions based on oxidative stress such as heart disease, immune disorders, sleep and mood disorders, migraines, damage to sperm and ovaries and DNA damage, a precursor for cancer^{6,7}. There are hundreds of published experiments showing many types of negative effects on human physiology from everyday wireless signals⁸ (see ORSAA videos and podcasts overviewing the science here). Most concerning are the effects on children's mental and emotional well-being⁹.</p>	<table border="1"> <thead> <tr> <th>Effects / changes / disruptions</th> <th>Number of papers</th> </tr> </thead> <tbody> <tr><td>Altered enzyme activity / Protein...</td><td>102</td></tr> <tr><td>Biochemical changes</td><td>100</td></tr> <tr><td>Oxidative stress / ROS / Free radicals</td><td>79</td></tr> <tr><td>Cell function / Morphology</td><td>59</td></tr> <tr><td>Sperm / Testicular</td><td>40</td></tr> <tr><td>DNA damage / Mutagenic / Genotoxic</td><td>38</td></tr> <tr><td>Neurobehavioural/Cognitive</td><td>33</td></tr> <tr><td>Altered gene expression</td><td>29</td></tr> <tr><td>Haematological</td><td>27</td></tr> <tr><td>Cell apoptosis</td><td>24</td></tr> <tr><td>EEG / Brainwaves</td><td>24</td></tr> <tr><td>Immune system</td><td>21</td></tr> <tr><td>Endocrine / Hormonal</td><td>20</td></tr> <tr><td>Thyroid</td><td>20</td></tr> <tr><td>Brain development /...</td><td>19</td></tr> <tr><td>Liver</td><td>11</td></tr> <tr><td>Memory Impairment</td><td>11</td></tr> <tr><td>Cardiovascular / Vascular</td><td>11</td></tr> <tr><td>Synergistic / Combinative</td><td>10</td></tr> <tr><td>Cellular stress</td><td>10</td></tr> <tr><td>Induced adaptive response</td><td>7</td></tr> <tr><td>Glucose level / metabolism</td><td>7</td></tr> <tr><td>Neurotransmitters</td><td>6</td></tr> <tr><td>Inflammation</td><td>6</td></tr> <tr><td>Mitochondria</td><td>4</td></tr> <tr><td>Visual / Ocular</td><td>4</td></tr> <tr><td>Blood brain barrier</td><td>4</td></tr> <tr><td>Tumour promotion</td><td>3</td></tr> <tr><td>Calcium influx / Efflux</td><td>2</td></tr> <tr><td>Circadian rhythm disrupt'n</td><td>2</td></tr> <tr><td>Headaches / Migraines</td><td>2</td></tr> <tr><td>Fatigue</td><td>2</td></tr> </tbody> </table>	Effects / changes / disruptions	Number of papers	Altered enzyme activity / Protein...	102	Biochemical changes	100	Oxidative stress / ROS / Free radicals	79	Cell function / Morphology	59	Sperm / Testicular	40	DNA damage / Mutagenic / Genotoxic	38	Neurobehavioural/Cognitive	33	Altered gene expression	29	Haematological	27	Cell apoptosis	24	EEG / Brainwaves	24	Immune system	21	Endocrine / Hormonal	20	Thyroid	20	Brain development /...	19	Liver	11	Memory Impairment	11	Cardiovascular / Vascular	11	Synergistic / Combinative	10	Cellular stress	10	Induced adaptive response	7	Glucose level / metabolism	7	Neurotransmitters	6	Inflammation	6	Mitochondria	4	Visual / Ocular	4	Blood brain barrier	4	Tumour promotion	3	Calcium influx / Efflux	2	Circadian rhythm disrupt'n	2	Headaches / Migraines	2	Fatigue	2
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5	<p>The Australian ARPANSA¹ guidelines for safety limits on exposures¹⁰ use the International ICNIRP² limits on exposures¹¹, which are set way too high because ICNIRP only admits to short term heating as important to health, and not to any other effects. Many biological effects on humans and wildlife have been found at levels lower than that than the ICNIRP limits^{12,13}. ICNIRP / ARPANSA opinion is based on two experiments in the 1980s showing that at a certain level of heating from non-ionising radiation, rats and monkeys stopped pressing a bar for food¹⁴. These results give no indication of the effects of long term, real-world wireless signalling on human physiology. They are therefore irrelevant to users in the current world.</p>																																																																			

¹ Australian Radiation Protection and Nuclear Safety Agency <https://www.arpansa.gov.au/>

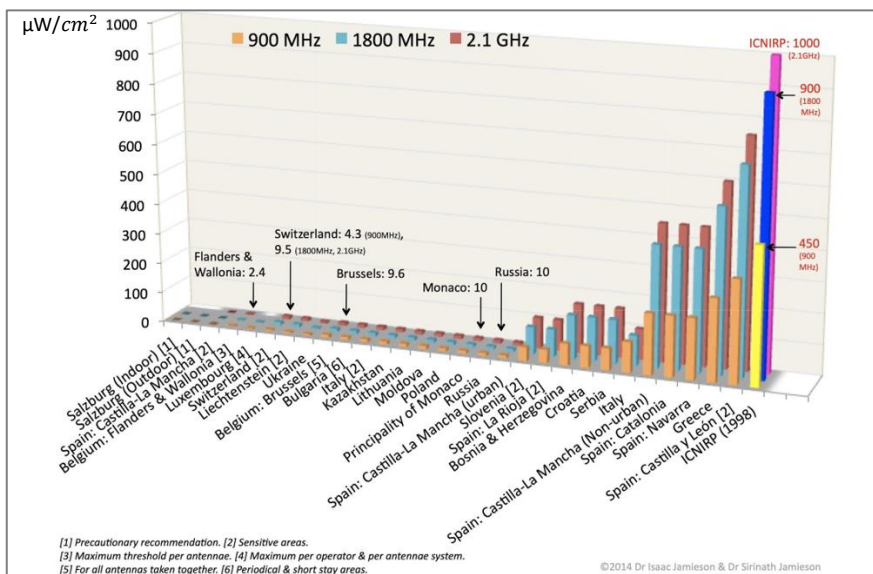
² International Commission on Non-Ionizing Radiation Protection <https://www.icnirp.org/>

<p>6</p>	<p>The ICNIRP guidelines ignore any consequences for sensitive, vulnerable populations, including:</p> <ul style="list-style-type: none"> • Children, small adults and women who have a higher incidence of coupled electromagnetic energy deposited into their brains^{15,16} • The increase of autism, depression and anxiety in young people is linked to 24/7 wireless exposures, altering neurotransmitters and increasing brain inflammation^{9,17}. • ElectroHyperSensitivie individuals who are effected by wireless signalling in all public places, with a significantly reduced quality of life¹⁸. Moreover, their condition is incorrectly labelled as psychosomatic by industry-friendly researchers¹⁹ even though it has been recognised in workers compensation cases²⁰. 	<p>How mobile phone radiation penetrates the brain</p> 
<p>7</p>	<p>The telecommunications industry and ARPANSA continue to use the inaccurate and outdated ICNIRP guidelines to its advantage. ICNIRP is a small self-referencing private club of industry-friendly researchers with no relevant medical expertise and tainted by industry links. They are far from being an independent organisation²¹. There are many cross-links between industry-tainted scientists²², the WHO EMF project²³, ICNIRP and national regulatory bodies²⁴ (see diagrams to right and below) Investigate Europe, an independent media group concluded major conflicts of Interest among ICNIRP members²⁴. EU parliamentarians²⁵, and the court of Turin²⁶ have declared the ICNIRP position to be compromised and unreliable. In spite of this, ICNIRP guidelines are supported by ARPANSA and are used to govern levels of exposure allowed for the Australian public, effectively giving carte-blanche to the telcos, energy companies, and ACMA.</p>	

Why have you not heard about this?

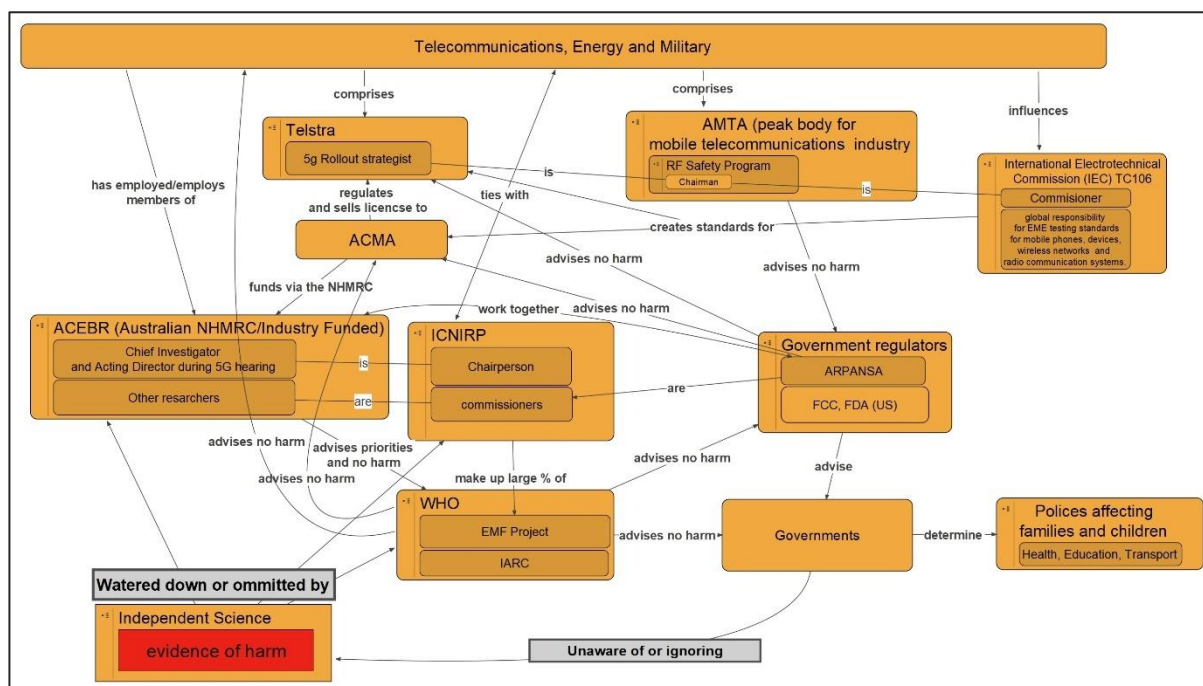
<p>8</p>	<p>Cover up by compromised science and regulatory bodies</p> <p>The science of harm from wireless (microwave) signals has been covered up for 50 years, similar to smoking. The 'science of doubt' has been delivered in the service of members of international mobile telecommunications associations. Well-positioned, industry-supported researchers have delivered ineffective information, omitting known health risks, to government, policy makers and the public.</p> <p>e.g. Ericsson Sweden which develops Telecommunication equipment had staff members in the 1990s who became Electrohypersensitivity (EHS), including the brilliant Swedish engineer Per Segerback Ericsson made accommodation for the condition so these valued workers could continue working²⁷.</p> <p>e.g. Australian CSIRO scientist David McDonald became electrosensitive at work, and was awarded compensation by the Administrative Appeals Tribunal of Australia in 2013²⁸</p> <p>e.g. Currently, many mobile phone models (including Samsung and iPhone) emit signals that heat the brain higher than the ICNIRP standards (which are already way too high). This scandal has been known of since 2016, yet covered up^{29,30}. Industry continues to sell phones that violate ICNIRP, and governments continue to turn a blind eye to this fact. Thus, the brains of millions of users around the world are being exposed to dangerously high levels of microwave radiation 24/7 year after year.</p> <p>The coverup situation has allowed the rollout of 5G to occur with zero scrutiny from government and policy makers³¹. This was admitted to by the Telcos in the US Senate Inquiry³².</p> <p>Ever since DNA damage from mobile phones was found in the late 1990s, the telecommunications industry, in their own words, has been 'war-gaming the science'. Several Australians have been pivotal in this cover up and the promotion of industry friendly advice³³⁻³⁶.</p> <p>Altogether, this coverup and the resultant profiteering of the wireless industry is a scandal as big as the cover up regarding several harmful substances created by chemical and pharmaceutical companies.</p>
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<p>9</p>	<p>Compromise and greenwashing in government</p> <p>The recent 5G parliament inquiry did not cover health as an issue. In spite of this, 85% of the 538 submissions expressed concerns about health effects. While this inquiry was still in progress, the Australian Federal Minister for Communications, Cyber Safety and the Arts, approved nine million dollars in taxpayer funds to counter 'misinformation about 5G'.</p> <p>Several parliamentary members of the 5G Inquiry hold shares in the wireless industry.</p> <p>Government is beholden to industry due to the huge funding coming from telecommunications (millions per year in revenue from ACMA licensing).</p> <p>Government is bedazzled by greenwashing and other promises. The 5G rollout is about profit and convenience, but politicians have been coerced via a 'richer, healthier and smarter' and 'green washing' spin strategy. The opposite is true¹³:</p> <ul style="list-style-type: none"> • 5G millimetre signals do not travel far and thus require 'line of sight', meaning many more towers and antennas on street poles. To power all of this infrastructure, the 5G rollout uses 10 times more energy than previous technologies or wired solutions (admitted to by industry¹³). • Rolling out 5G for 'green' reasons has created a hypocrisy in government policy that violates all current calls for reducing energy consumption. Users are paying the bill as energy process soar without the real explanation being given. • There is a lack of safe 'White zones' for those peoples whose health is affected by wireless radiation³⁷. <p>Better solutions for connectivity exist, but are so far ignored; e.g., wired connectivity is faster, more reliable and much more energy efficient^{6,38,39}, and smart meters only need to be read once a quarter rather than taking data many times a day¹³.</p>
<p>10</p>	<p>Industry, ICNIRP and ARPANSA argue that we need to wait for 'conclusive evidence'. However, this level of certainly is only relevant to science, not to policy makers who need to focus on mitigating risks⁴⁰.</p> <p>Australia needs to take action to risk manage continuous wireless radiation exposures, just like it has done in the past with ionising radiation used by the nuclear industry.</p> <p>Many other countries have lowered their exposure limits (see below).</p> <p>In Australia, government needs to do its job rather than letting industry dictate the terms.</p> <p>Most of the recommendations of the Australian 2001 senate inquiry into this issue⁴¹ have not been adopted, including educating parents and children about harmful effects, giving communities and councils input into placement of towers, establishing an independent body that sets standards (i.e. not ACMA or ARPANSA), funding priorities for research to be based on a register of complaints about harmful effects, and wider buffer zones for powerlines.</p>



Tightening of various European regional and state limits for chronic exposure to RF EMFs over the past 23 years⁴².

Note: The units are in microwatts per square centimetre ($\mu\text{W}/\text{cm}^2$). Australia has adopted the highest exposure level as its limit ($1000 \mu\text{W}/\text{cm}^2$). The 2001 Senate inquiry recommended it stay at the AS/NZS standard 1985 level of $200 \mu\text{W}/\text{cm}^2$.



The interconnectedness of industry and government advisory bodies nationally and internationally

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