

Studies on Base Stations and other Telecommunications Towers

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Rationale for research?

- Exposure from transmitters is weak:

Perhaps more logic to look at situations with higher exposure levels [phones]?

- However,
 - Exposure is whole body and long term,
 - And there is public concern

Studies

- Scopes
 - TV, radio transmitters and cancer
 - Base stations and cancer
 - Base stations and symptoms
- Methodologically difficult research area
- Literature reviewed repeatedly
[E.g., Ahlbom et al. EHP 2004]

Transmitters and cancer

Selvin 1992	San Francisco
Maskarinec 1994	Hawaii
Hocking 1996	Sydney
Dolk I 1997	Sutton Coldfield
Dolk II 1997	All UK
McKenzie 1998	Sydney
Cooper 2001	Sutton Coldfield
Michelozzi 2002	Vatican
Park 2004	Korea
Wolf 2004	Israel [base station]

Comments

- All studies based on proximity, rather than RF exposure [although exposure has been assessed in some]
- Several studies suggest risk elevations
- However, uncertainties regarding:
 - "Texas sharp shooting"
 - Selection bias [matching of cases and study base]
 - Inadequate demographic data
 - Random variability
 - RF exposure

Transmitters [base stations] and symptoms

Santini 2002

France

Navarro 2003

Murcia, Spain

Comments:

Uncertainties with respect to definition of study population and response rates

Reporting bias and selection bias potential problems

Conclusions

- Research gives no evidence of increased risk near transmitters or from RF exposure from transmitters
- However, available studies give weak test of the possibility of risk increase
- Basis for hypothesis of association is weak

Requirements for informative studies

- Well defined study population and mechanism to identify appropriate cases
- Large enough to secure acceptable precision in risk estimates [highly exposed is critical number]
- If aim is risk estimate for RF exposed, rather than for those living in proximity to transmitters, relevant exposure assessment must be developed