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Communication Technology Changes how We Age

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J.L. Fozard, W.D. Kearns. *Communication technology changes how we age. Gerontechnology 2008; 7(2):106.* Gerontechnology is an interdisciplinary field that combines research on the sciences underpinning technology and aging to achieve optimal technical environments for aging and aged people. Of the six technical disciplines most directly involved in Gerontechnology--chemistry, architecture, communication, mechatronics (robotics), ergonomics, business management—communication is directly or indirectly involved in more areas of technologically supported environments--health, everyday living, transportation, work and leisure--than any of the others^{1, Table 1}. The paper will selectively review the research on communication and aging with special attention to how these technologies improve: acceptance and use of communication technology; communication between people; between people and machine generated information; and the use of direct communications between machines and people to influence or direct human behavior. Special attention will be given to the role of high speed networking and embedded technologies in creating new dimensions of communication between people and machines². **Methods** *Overcoming age associated limitations in perceptual motor and cognitive function*³: (i) Display/control, (ii) Technology generations, (iii) Training, situated learning, (iv) Motivational factors in adopting new technology. *Improving communication between people*: (i) Remote behavioral and physiological monitoring of persons—security, accidents, etc., (ii) Teleconferencing, (iii) Visual and auditory enhancers. *Improving communication between people and machine generated information*: (i) Ergonomics of web pages, computer displays and small visual displays, (ii) Slowing of speech in TV broadcasts. *Direct communications between people and machines*: (i) Service robots, (ii) Spoken and visual information to provide information, e.g., GPS wayfinding systems⁴, (iii) Machine coaching for nutritional guidance and exercise and fitness training, (iv) Combining location-aware technology with machine generated directions and advice. **Results and discussion** Research and development activities for the last topic are more recent and less well known than the other three; accordingly more attention will be given to them.

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