Trees - an Integrated Approach to Public Health Concerns

Health care is a topic on everyone's mind. Costs are soaring, and so are the rates of many of our most pressing health concerns, such as obesity, asthma, depression, diabetes, and heart disease. As policy makers work to increase access to health care, scientists and doctors work to develop new treatments, and public health advocates work to spread information, we should keep in mind an integrated part of the solution right outside--our urban forests.

***TREES* can improve health?**

Trees will never replace antibiotics or pacemakers or chemotherapy of course, but their presence does affect healing and health in all kinds of ways, directly and indirectly.

- Lack of Physical Activity - Many of our greatest public health problems, including obesity, heart disease, and diabetes relate directly to a lack of activity. The California Obesity Prevention Plan specifically highlights access to green spaces as a critical component of good health. Studies have shown that:
  (1) access to nature increases physical activity[i]
  (2) physical activity in nature has greater benefits than exercise undertaken in other settings[ii]
  (3) children with access to trees and grass were twice as likely to play outside as those who did not[iii] and were less likely to gain extra weight.[iv]

ADHD - The number of children diagnosed with ADHD increases every year and available medical treatments are often unsuccessful or plagued with side effects. Contact with nature has been shown to lessen ADHD symptoms,[v] and a recent study even found that a 20 minute walk in a park increased concentration to levels similar to those reported with Ritalin.[vi]

- Asthma - Childhood asthma rates have increased by 50% in the U.S. in the last 30 years and poor urban communities are hardest hit. Trees—by reducing air pollution or even just by encouraging children to play outside—have been associated with lower levels of asthma.[vii]

- Healing and Prescriptions - Healing time in the hospital and prescription drug use are two of the biggest drivers of health care costs. Views of nature have been shown to reduce the need for both.[viii]

- Stress - None of us are immune to the stresses of modern living, which can have significant negative impacts on our health, raising blood pressure, lowering our

immunity, and increasing depression. Decades of studies have demonstrated that experiencing nature reduces stress,[ix] boosts immunity,[x] and improves concentration and mood.[xi]

A worthwhile investment

In difficult financial times like those of today, the trees in our cities—our urban forests—are often seen as something of a luxury, an easy line to trim in the budget. We must remember, however, that their benefits go far beyond the merely aesthetic. Our urban forests provide valuable contributions to public health, particularly for the most vulnerable members of our communities—those who are financially disadvantaged, those who are chronically ill, and our children. Our commitment to plant and care for trees will reap benefits long into the future.

Sources for more information

- The Landscape and Human Health Laboratory at the University of Illinois http://lhhl.illinois.edu/
- The Alliance for Community Trees research archive http://actrees.org/site/resources/research/
- Sacramento Tree Foundation's Social, Psychological, and Community Benefits of Trees webpage http://www.sactree.com/doc.aspx?93
- The Urban Ecosystems and Processes team (formerly the Center for Urban Forest Research) of the US Forest Service: http://www.fs.fed.us/psw/programs/uesd/uep/
- California Urban Forests Council: http://www.caufc.org/
- Invest From the Ground Up: http://www.investfromthegroundup.org
- The Urban Forest Management Plan Toolkit: http://www.ufmptoolkit.com/
- United Voices for Healthier Communities: http://www.unitedvoices.org/

References

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[ii] Pretty J, Peacock J, Sellens M, Griffin M (2005) The mental and physical health outcomes of green exercise. International Journal of Environmental Health Research 15:319-37

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[iv] Bell JF, Wilson JS, Liu GC (2008) Neighborhood greenness and 2-year changes in body mass index of children and youth. American Journal of Preventive Medicine 35:547–553.

[v] Taylor AF, Kuo FE, Sullivan WC (2001) Coping with ADD: the surprising connection to green play settings. Environment and Behavior 33:54–77.

[vi] Taylor AF, Kuo FE (2008) Children with attention deficits concentrate better after a walk in the park. Journal of Attention Disorders 12:402–409.

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[viii] Ulrich RS (1984) View through a window may influence recovery from surgery. Science 224:420–421.

[ix] Parsons R, Tassinary LG, Ulrich RS, Hebl MR, Grossman-Alexander M (1998) The view from the road: implications for stress recovery and immunization. Journal of Environmental Psychology 18:113–140.

[x] Li Q, Morimoto K, Nakadai A, et al. (2007) "Forest bathing" enhances human natural killer activity and expression of anti-cancer proteins. International Journal of Immunopathology and Pharmacology 20:3–8.

[xi] Kaplan S (1995) The restorative benefits of nature—toward an integrative framework. Journal of Environmental Psychology 15:169–182.