



Healthy & Green: Living and working with plants

Plants - our perfect partners

Plants fit together with us perfectly

- They clean the air we breathe by removing harmful unseen toxins (VOCs) emitted into the air by man-made products and us!
- Toxins are absorbed and taken to the plants' roots
- Micro-organisms living here, turn them into food for the plant

CO2 and CO can be removed by plants

- Plants give us 'two-way refreshment'
- They give us equal amounts of Oxygen for the CO2 they absorb

**Plants are the greenest way of improving indoor air quality
All plants remove toxins from the air!**



'Oxygen is vital to all organisms that require oxygen for respiration. The living processes of animals would deplete the atmosphere of oxygen if it were not replenished by photosynthesis. Life supporting oxygen is produced by plants'

Dr Bill Wolverton



- Did you know we breathe in 5 - 6 litres of air per minute
- In offices in Edinburgh, levels of CO2 were reduced by 50% after introducing plants. CO levels were reduced significantly too
- CO2 causes us to feel drowsy or heavy headed. Make sure the plant is in its best location to ensure it works well
- Larger, woodier plants work faster and absorb more CO2 than smaller plants. Like us, plants must be healthy to work efficiently
- Some plants such as Orchids, Bromeliads and Succulents, make this Oxygen/CO2 exchange at night due to their original habitat conditions

How many plants do you need?

- Just one plant will improve mood and reduce stress and anxiety
- One plant for every 3 people can improve indoor air quality

Plants reduce absenteeism

- Plants reduce symptoms linked to Sick Building Syndrome
- They can reduce headaches by 45% and tiredness by 32%
- As a result absenteeism can be reduced by anywhere from 30% - 60%



Plants improve concentration, motivation and productivity

- Plants improve our performance and productivity (12% - 38%)
- And our concentration (23%)
- Particularly true if we sit in front of computer screen for more than 4 hours a day
- We are less likely to be inattentive when we have plants in the room
- Plants help us to think
- Even just one plant will reduce our feelings of negativity helping us to feel and perform better

Plants keep us calm

- The physical symptoms of stress – higher pulse rates and blood pressure – return to normal more quickly when plants are present
- When employees are less stressed, they take less time off sick. And they perform better – by between 12% and 38%
- Plants have an uplifting effect on people who are stressed or tired
- Plants help to reduce the stress of surgery ensuring that patients recover faster and need less medication and attention

Just one plant can have a very positive effect on our mood so that we feel much better



The more plants that can be seen from an employee's desk, the less self-reported sick leave they take

How plants affect our creativity

- Plants raise our creativity (45%)
- In fact, plants stimulate and improve performance in creative tasks
- And improve our confidence and energy
- Plants make us happy
- Plants give us a more positive perception of our surroundings and people
- Caring for a plant has a positive effect on health and social interaction in the elderly



Did you know that ...

... plants in shopping malls increase shopper stay time by half an hour

... that plants outside a shop give it a higher-quality perception



What else can plants do?

- Raise humidity levels so that we are more comfortable
- Less dust around (20%) to irritate or need cleaning up!
- Lessen noise - the leaves deflect and diffract sound especially where there are no carpets



Plants to save energy

- By using plants to shade room from the inside!
- This can reduce the need for air conditioning or at least reduce the need for it as often

Benefits of plants

- They raise our general well-being by as much as 47%
- We enjoy working in planted offices
- We are more confident
- We experience better job satisfaction and speak more highly of our colleagues and employers!



Green roofs

- Green Roofs insulate and sound proof the building
- They absorb 80% of rainfall (reducing run off)
- Reduce temperatures of urban heat islands i.e. green roofs reduce surface temperatures by 20% and help to cool the inside of the building
- Therefore they can save energy costs
- Regenerate biodiversity and ecosystems



Outdoor green walls

- Cut street level pollution by 30%
- Absorb fine dust particles
- Reduce ambient wind speeds
- They act as insulation and reduce noise levels inside the buildings

Biophilia

- A hypothesis first theorised by Harvard professor E O Wilson
- Humans have an innate need to connect with nature
- Plants in the workplace help to address our 'nature deficit'

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