

Added benefits of swimming outdoors



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Background

- Pools are an important public amenity
- Swimming confers benefits to
 - Water safety (📉 drowning risk)
 - Physical, especially cardiovascular, fitness
 - Mental health
 - Social integration and well-being

Optimising benefits

- Ease of access
- Pool safety
- Outdoor vs. indoor pools
 - Sunlight essential for vitamin D synthesis
 - Health risks reduced outdoors
 - less chlorine by-products
 - less provocation of asthma, allergies

Guidelines for safe recreational waters (2006): Swimming pools and similar recreational-water environments

Table 4.6. Comparison of trihalomethane concentrations in blood of swimmers after a 1-h swim, in pool water and in ambient air of indoor and outdoor pools^a

	THM concentration (mean, range)	
	Indoor pool	Outdoor pool
Blood of swimmers ($\mu\text{g}/\text{l}$)	0.48 (0.23–0.88)	0.11 (<0.06–0.21)
Air 20 cm above the water surface ($\mu\text{g}/\text{m}^3$)	93.6 (23.9–179.9)	8.2 (2.1–13.9)
Air 150 cm above the water surface ($\mu\text{g}/\text{m}^3$)	61.6 (13.4–147.1)	2.5 (<0.7–4.7)

^a Adapted from Strähle et al., 2000

Ventilation is crucial

- Trihalomethane (THM) is to be avoided!
- THM exposure is mainly by inhalation, rather than skin (Erdinger et al. 2004)
- THM concentrations are much higher in the air above indoor compared to outdoor pools (Strahle et al. 2000)

Regular indoor swimming increases the risk of developing asthma and allergies

Bernard, A. et al. Lung hyperpermeability and asthma prevalence in schoolchildren: unexpected associations with the attendance at indoor chlorinated swimming pools.

Occupational and Environmental Medicine
2003; 60: 385-394.

Why keep municipal pools open?

- Access
 - Only public facility in central city
 - Many users can't or won't travel elsewhere
 - Consistent with HCC plan to revitalise CBD
- Health
 - Benefit to harm ratio higher than for indoor pools
 - Specific health considerations
 - vitamin D
 - in chlorinated pools, less risk of asthma, allergies, cancer
 - Reduced carbon footprint