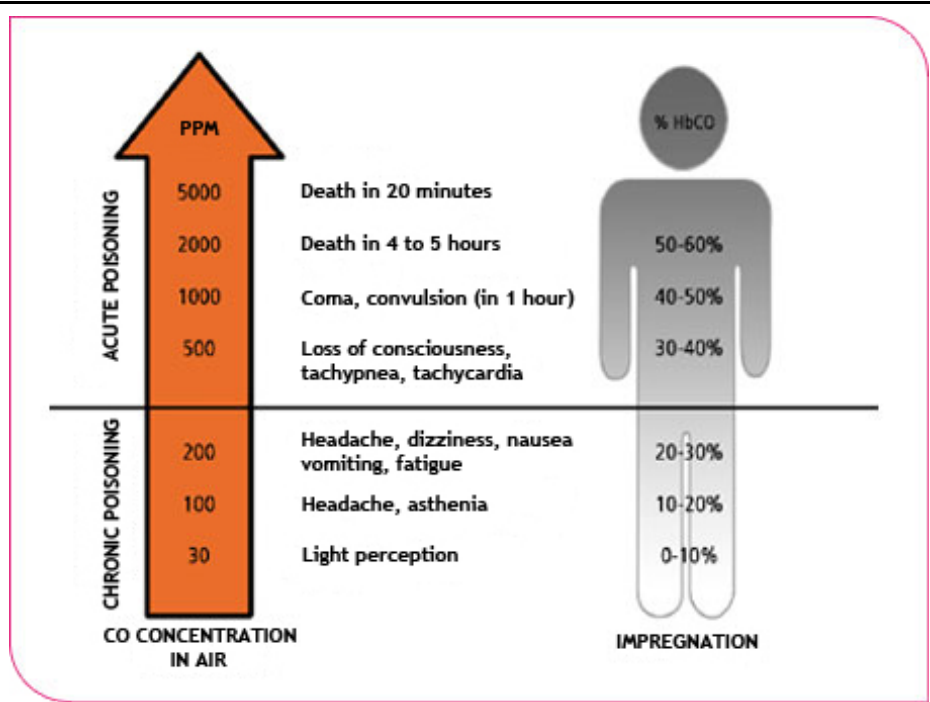


stuff

Thresholds

**Carbon Monoxide**



Concentration Level*	Effects of CO Poisoning	Comments
0 - 1 PPM	none, no symptoms	considered to be normal background levels
1 - 9 PPM	none - monitor air closely	maximum indoor air quality - short term
9 - 35 PPM	minimal effects possible over time	OSHA - 8 hour limit
35 - 100 PPM	flu like symptoms, headache	mild exposure, but potentially dangerous
100 - 200 PPM	dizziness, drowsiness, vomiting	OSHA - 15 minute exposure limit
200 - 400 PPM	frontal headache, fatigue	medium exposure, but not safe to occupy
400 - 800 PPM	unconsciousness, brain damage	extreme exposure, life threatening after 3 hrs.
800 - 1600 PPM	nausea, convulsions, death	very dangerous and hazardous - death 1 hr.
12,000 PPM	death in 1 to 3 minutes	extremely hazardous environment

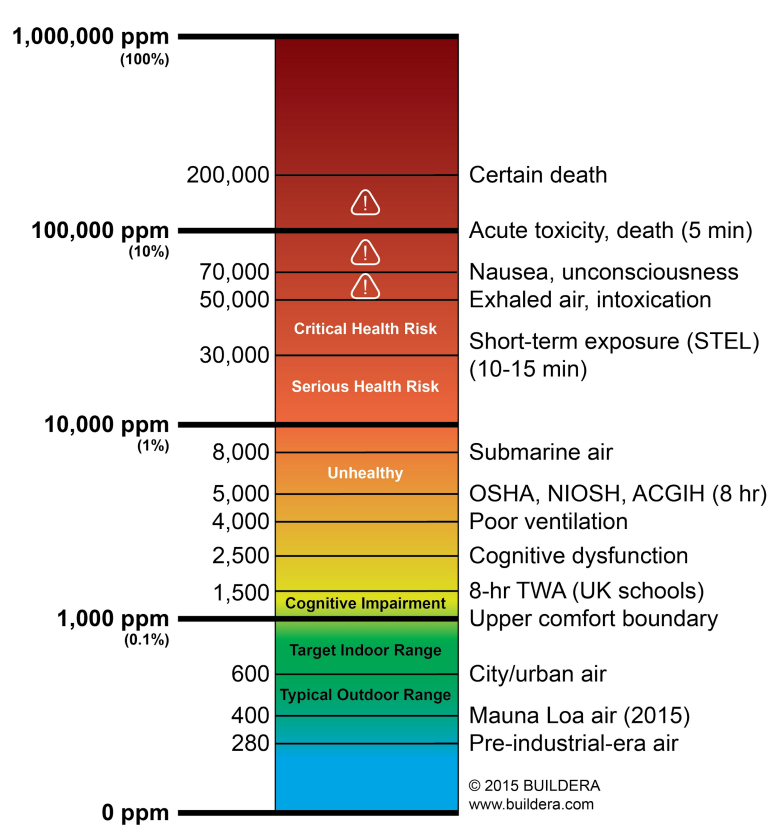
\*Carbon monoxide is measured in parts per million (PPM.)

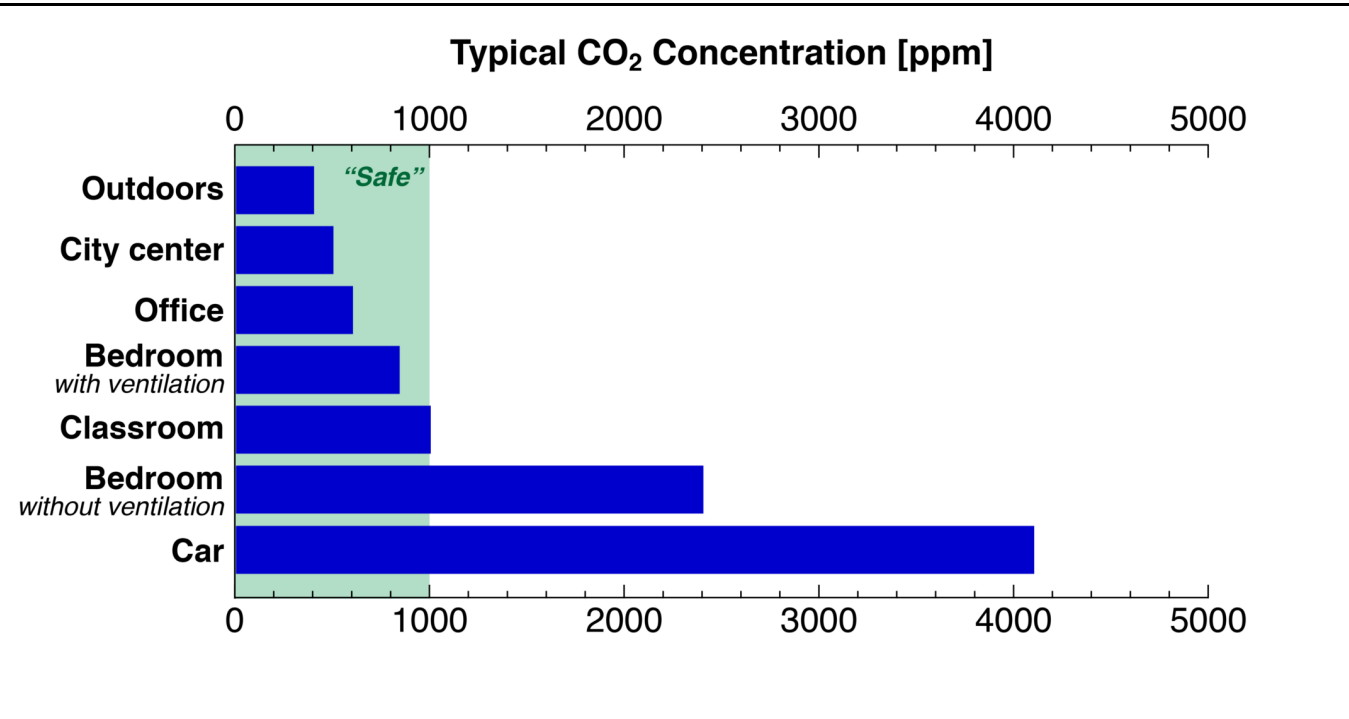
## CARBON MONOXIDE (CO) POISONING



**Carbon Dioxide**

**Carbon Dioxide (CO<sub>2</sub>) Hazard Scale**





**VOCs**

Level	Hygienic Rating	Recommendation	Exposure Limit	TVOC [ppb]
5 Unhealthy	Situation not acceptable	Use only if unavoidable / Intense ventilation necessary	hours	2200 – 5500
4 Poor	Major objections	Intensified ventilation / airing necessary Search for sources	< 1 month	660 – 2200
3 Moderate	Some objections	Intensified ventilation / airing recommended Search for sources	< 12 months	220 – 660
2 Good	No relevant objections	Ventilation / airing recommended	no limit	65 – 220
1 Excellent	No objections	Target value	no limit	0 – 65

**Dust**

### EPA's Air Quality Index (AQI) for 24-hour Fine Particle Pollution (PM<sub>2.5</sub>)

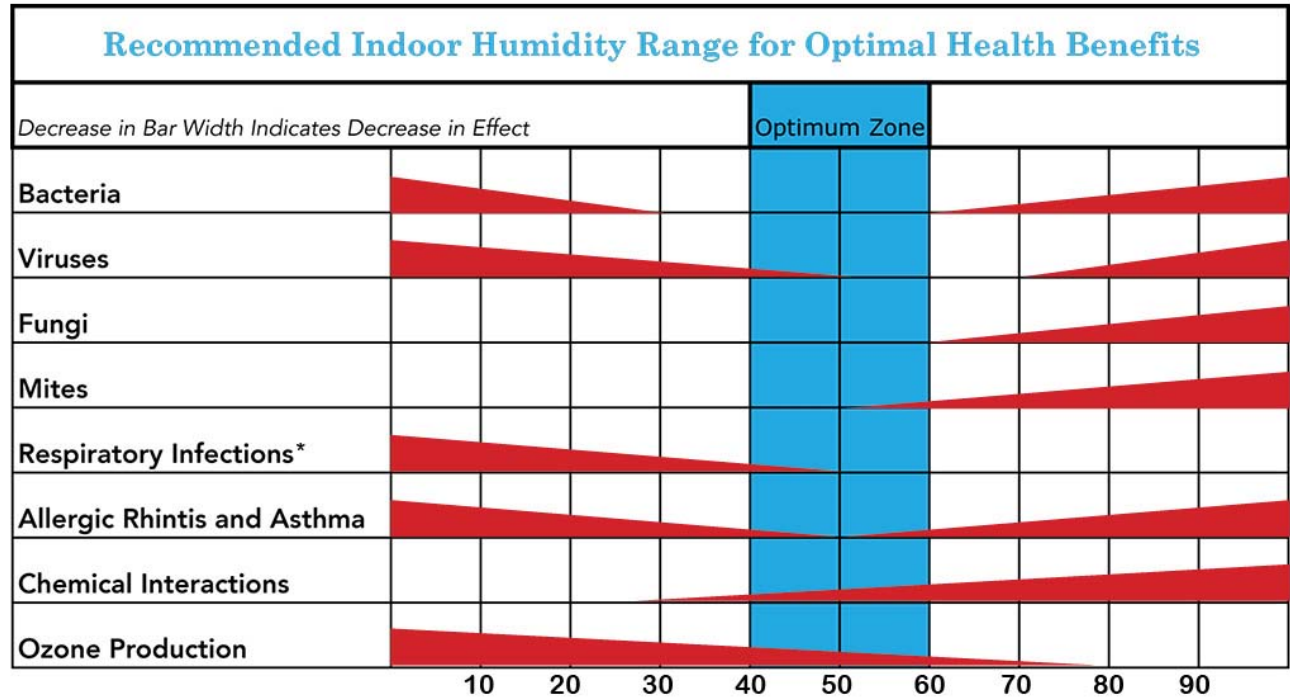
24-hr PM <sub>2.5</sub> (µg/m <sup>3</sup> )	AQI Categories	AQI Values	AQI Cautionary Statements	AQI Health Effects Statements
0 – 12.0	Good	0 - 50	None	None
12.1 – 35.4	Moderate	51 - 100	Unusually sensitive people should consider reducing prolonged or heavy exertion.	Respiratory symptoms possible in unusually sensitive individuals, possible aggravation of heart or lung disease in people with cardiopulmonary disease and older adults.
35.5 – 55.4	Unhealthy for Sensitive Groups	101 - 150	People with heart or lung disease, older adults, and children should reduce prolonged or heavy exertion.	Increasing likelihood of respiratory symptoms in sensitive individuals, aggravation of heart or lung disease and premature mortality in people with cardiopulmonary disease and older adults.
55.5 – 150.4	Unhealthy	151 - 200	People with heart or lung disease, older adults, and children should avoid prolonged or heavy exertion; everyone else should reduce prolonged or heavy exertion.	Increased aggravation of heart or lung disease and premature mortality in people with cardiopulmonary disease and older adults; increased respiratory effects in general population.
150.5 – 250.4	Very Unhealthy	201 - 300	People with heart or lung disease, older adults, and children should avoid all physical activity outdoors. Everyone else should avoid prolonged or heavy exertion.	Significant aggravation of heart or lung disease and premature mortality in people with cardiopulmonary disease and older adults; significant increase in respiratory effects in general population.
Greater than 250.5	Hazardous	Over 300	Everyone should avoid all physical activity outdoors; people with heart or lung disease, older adults, and children should remain indoors and keep activity levels low.	Serious aggravation of heart or lung disease and premature mortality in people with cardiopulmonary disease and older adults; serious risk of respiratory effects in general population.

**Who is "SENSITIVE" to PM<sub>2.5</sub>?** "People with heart or lung disease, older adults, children, and people of lower socioeconomic status are the groups most at risk." Also at higher risk: **prenatal children** (low birth weight, pre-term birth, and IQ reduction), **diabetics**, and people with higher exposures such as **athletes** exposed during exercise.

Sources: <http://cleanairfairbanks.files.wordpress.com/2013/01/aqi-chart-for-pm-2-5-pollution-2013.pdf>

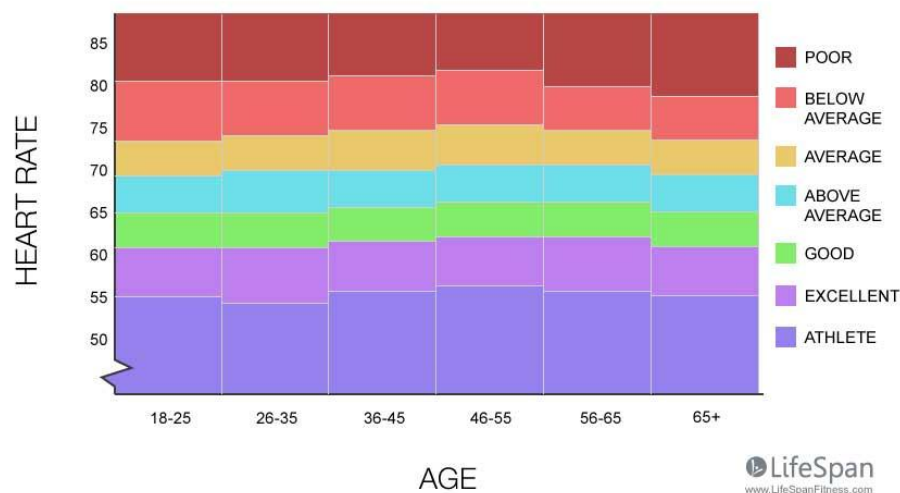
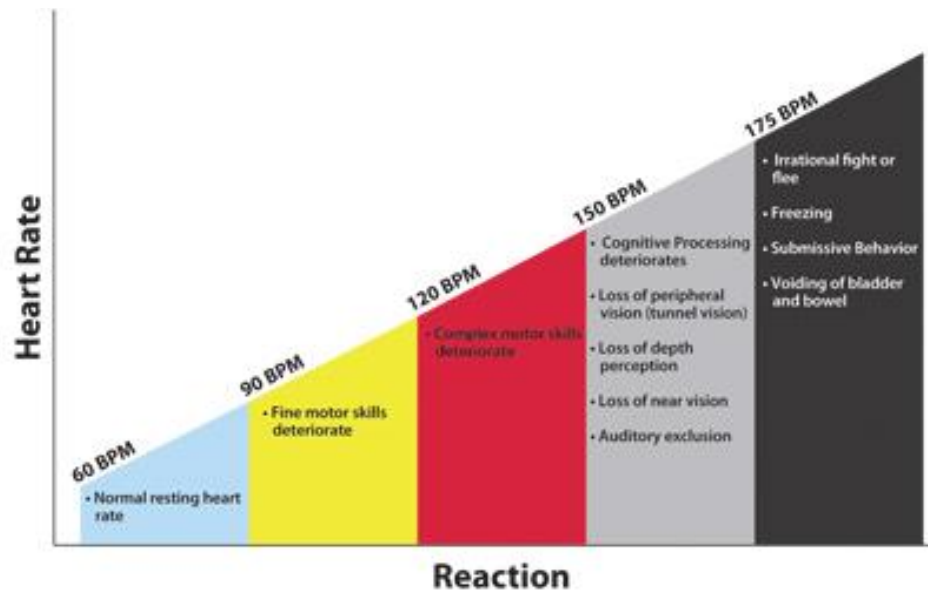
2013 by Clean Air Fairbanks [cleanairfairbanks@gmail.com](mailto:cleanairfairbanks@gmail.com) <http://cleanairfairbanks.wordpress.com>

**Humidity and Mold**



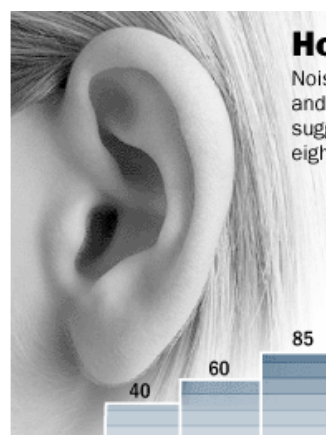
Source:  
 Arundel, Anthony V., Elia M. Sterling, Judith H. Biggin, and Theodor D. Sterling. "Indirect Health Effects of Relative Humidity in Indoor Environments." *Environmental Health Perspectives* 65 (1986): 351-61. Web.  
 \*Insufficient Data Above 50% Relative Humidity

**Heart Pulse and Stress**



LifeSpan  
 www.LifeSpanFitness.com

**Noise Levels**



**How Loud Is Too Loud?**

Noise-induced hearing damage is related to the duration and volume of exposure. Government research suggests the safe exposure limit is 85 decibels for eight hours a day. Some common decibel levels:

