CHEMICAL COMPOUNDS IN CIGARETTE SMOKE

THIS GRAPHIC OFFERS A SUMMARY OF A SELECTION OF HAZARDOUS COMPOUNDS IN CIGARETTE SMOKE & THEIR EFFECTS

The compounds shown below are all found in cigarette smoke. The mass figures, given in µg, take into account both mainstream (inhaled) and sidestream smoke. 1 µg is equal to 1 millionth of a gram. Amounts of these compounds vary in different brands of cigarettes - these figures are approximate.

ESTIMATED NUMBER OF CHEMICAL COMPOUNDS IN CIGARETTE SMOKE

7,357

NUMBER OF THESE COMPOUNDS WITH CONFIRMED CARCINOGENIC ACTIVITY

70

NICOTINE
- Approx. 919µg per cigarette
- Addictive
- Increases heart rate
- Increases blood pressure
- Increases blood glucose
- Lethal dose: around 500-1000mg

ACETALDEHYDE
- Approx. 680-1571µg per cigarette
- Known animal carcinogen
- Probable human carcinogen
- Irritant to skin & eyes
- Irritant to respiratory tract

N-NITROSAMINES
- Large class of compounds
- Several are tobacco-specific
- Known human carcinogens
- Most carcinogenic: NNK & NNN
- NNK: approx. 0.3µg per cigarette
- NNN: approx. 2-50µg per cigarette
- May cause reproductive damage

1,3-BUTADIENE
- Approx. 36-191µg per cigarette
- Known human carcinogen
- Suspected human teratogen
- Irritant to eyes & skin
- Irritant to upper respiratory tract

BENZENE
- Approx. 46-272µg per cigarette
- Known human carcinogen
- Damages bone marrow
- Lowers red blood cell count
- May harm reproductive organs

ACROLEIN
- Approx. 69-306µg per cigarette
- Possible human carcinogen
- Known DNA mutagen
- Irritant to skin & nasal passages
- May contribute to heart disease

AROMATIC AMINES
- Large class of compounds
- Includes 2-aminonaphthalene:
  - Known human carcinogen
  - Linked with bladder cancer
  - Approx. 0.04µg per cigarette

POLYAROMATICS
- Large class of compounds
- Includes benzo[a]pyrene:
  - Known human carcinogen
  - Known DNA mutagen
  - Affects reproductive capacity
  - Up to 0.14µg per cigarette

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