

Food additives

Part -2



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Food additives



Types of food additives:

- Preservatives.
- Food colours.
- Food flavours and flavour enhancers
- High intensity / low calorie sweeteners.
- Antioxidants.
- Emulsifiers.
- Acidulants
- Anti-caking agents

Food additives



Preservatives:

- They prevent spoilage of food due to fungi , bacteria and other microorganisms•
- Commonly used in Low fat spreads Cheeses, margarine, mayonnaise Bakery products Dried fruit preparations

Examples

- sodium benzoate
- sodium nitrite
- benzoic acid
- BHA(butylated hydroxy anisole) /BHT(butylatedhydroxy toluene)

Food additives



Sodium benzoate-

carbonated drinks ,pickles ,sauces

Side effects:

Aggravates asthma and suspected to be a neurotoxin and carcinogen ,
may cause fetal abnormalities

Worsens hyperactivity

Food additives



Sodium nitrite and nitrate –

sausages, hot dogs, smoked fish, canned meats

Side effects:

Nitrite is a Carcinogen (prostate, breast and stomach cancer in humans)

Nitrate -Increases risk of miscarriages , fetal deaths and birth defects in lab. animals

Food additives



Benzoic acid –

Drinks, low sugar products ,cereals , meat products

Side effects:

May temporarily inhibit digestive enzyme function .

May deplete GLYCINE levels . AVOID in asthma ,or allergies

Food additives



BHA/BHT –

potato chips , vegetable oils , chewing gum(butylated hydroxy anisole/toluen

Side effects:

May be carcinogenic to humans .

BHA also interacts with nitrites to form chemicals known to cause changes in the DNA of cells.

Toxic to CNS and liver.

Food additives



TYPES OF FOOD ADDITIVE

- Additives described as generally Recognized as Safe (GRAS), mean that they have been used for many years without any known adverse effects, for example, salt, sugar and vinegar.
- Colours (natural colours, natural identical colours, synthetic colours)
- Flavours
- Emulsifiers
- Gelling agents
- Preservatives
- Sweeteners
- Anticaking agents
- Antioxidants
- Acidulants

CHEMICALS UNDER THE MICROSCOPE		
Additive	Where used	Potential problems
E102 Tartrazine	Sweets, biscuits, mushy peas	Hyperactivity, asthma, rashes
E124 Ponceau 4R	Sweets, biscuits, drinks	Allergy, intolerance
E110 Sunset Yellow	Sweets, drinks, ice cream	Gastric upset, allergy
E122 Carmoisine	Biscuits, jelly, sweets, ready meals	Allergy, intolerance
E104 Quinoline Yellow	Sweets, smoked haddock, pickles	Hyperactivity, asthma, rashes
E129 Allura Red	Soft drinks, cocktail sausages	Some evidence of hypersensitivity
E211 Sodium benzoate	Soft drinks, baked goods, lollies	Hyperactivity, asthma

Food additives



Additive Class	Function	Chemical substance	Foods in which used
<p>Colours and adjuncts*</p>  	<p>Provide, preserve or enhance the colour of a food</p>	<p>Annatto, carotene, cochineal, chlorophyll, nitrates Red – Ponceau 4 R, carmoisine erythrosine Yellow - Tartrazine, Sunset yellow FCF Blue- indigo carmine Brilliant Blue FCF Green – Fast green FCF</p>	<p>Ice- cream, biscuits, cakes confectionery sweets, savouries fruit syrup, fruit squash, fruit drink and beverage, soft drink, jam, 200 mg/kg. permitted</p>

Thank You

