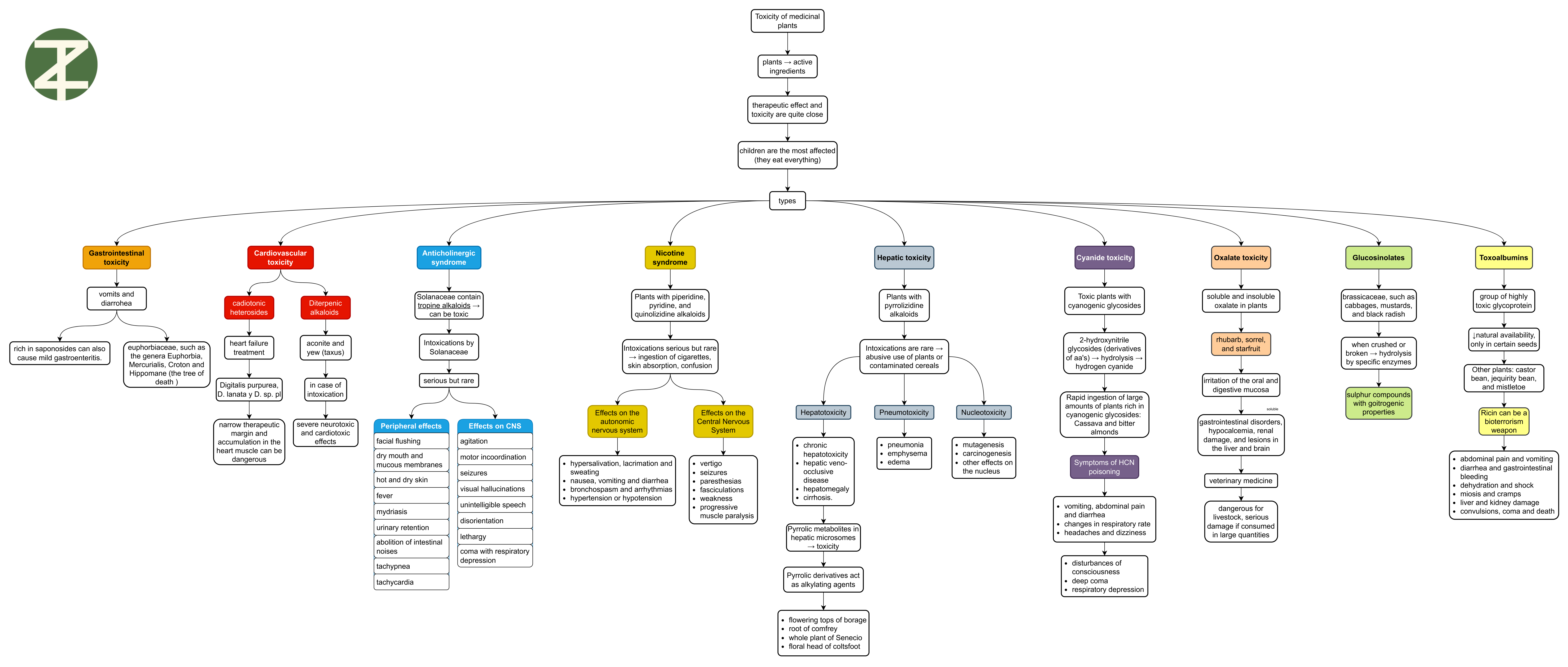






Adverse Reactions of Medicinal Plants

Increased consumption as self-medication

considered effective and safe due to their "natural" character

should actually be considered as medicines

adverse effects, interactions, and contraindications

should require same safety guarantees as other medicines

Types of Adverse Reactions

On the Central Nervous System

hallucinogenic and anticholinergic effects

headache, hyperexcitability, or drowsiness

Plants that alter CNS

Valerian root: withdrawal syndrome (prolongued use)

Fruit of star anise (atenol): neurotoxicity in children

Tuyona (tuya, sage, and absinthe): convulsions

Pinocamphone (hyssop): convulsions

Aerial parts of ephedra: headache, anxiety, tremors, insomnia

Cassava rhizome: cyanogenic heterosides → konzo (paraparesis)

Lathyrus seeds (ODAP): neurolathyrism (leg rigidity with a later paralysis)

Dermatological

Pruritus, skin rash, urticaria

Allergic contact dermatitis → aloe vera gel, garlic bulb

Photosensitization

bergamot, celery, fig (furanocoumarins), St. John's wort (naphthodianthrone)

Arnica flower (sesquiterpene lactones)

+ sunlight → acute dermatitis, vesicles to blisters, hyperpigmentation

from vesicles to necrotic lesions (use very diluted)

Hepatic

Highly susceptible to a wide range of injuries, a highly exposed organ

clinical manifestations of hepatotoxicity

Hepatic veno-occlusive disease

unsaturated pyrrolizidine alkaloids

borage, comfrey, senecio, coltsfoot

Chronic hepatitis

wall germander flowers

used in weight loss diets in the 90s, now banned

Cholestatic hepatitis

kava roots (from Polynesia with anxiolytic properties)

hepatic toxicity effects when imported to Europe, withdrawn in 2001

Suspension of the commercialization

ethanolic dry extract of green tea leaves with 25% catechols and 5-10% caffeine

2003; cholestatic hepatitis and steatosis

Nephrological

organ closely involved in the detoxification of xenobiotics

especially prone to toxic action

Irreversible nephropathies

species of the Aristolochia genus (prohibited in 2001)

aristolochic acid linked to kidney damage and disease

Belgian women, treatment with Chinese herbal medicines for weight loss...

Nephrolithiasis (kidney stones)

species of Ephedra (ephedrine)

can generate nephritic colic by precipitating in the renal tubules

It's infrequent

Endocrine

Not frequent

Consumption of iodine-rich algae (Fucus thallus)

recommended in certain weight loss regimens

hyperthyroidism

Ginseng root

ginseng abuse syndrome

- anxiety and irritability
- nervousness and insomnia
- hypertension
- morning diarrhea and skin rashes

+ estrogenic effects

Keep below 2g per day

Liquorice root

pseudo-hyperaldosteronism

- muscle weakness
- hypertension
- hypokalemia
- water and sodium retention

Glycyrrhizin and genin → enzyme inhibition and corticoid effect

Keep below 1-3g of licorice per day (200mg glycyrrhizin)

Others

Gastralgia

presence of tannins, saponins, and/or essential oil

in butcher's broom or horse chestnut

Slight laxative effect of devil's claw root

Stimulant laxative drugs of the colon

hydroxyanthracene derivatives

senna leaves and aloe vera gel

blackish discoloration of the colon + lazy bowel syndrome

Ginkgo leaf

- headaches
- dizziness
- digestive disorders
- allergic reactions

Garlic bulb

- digestive disorders
- dermatitis
- characteristic odor in breath and sweat

