

Gout

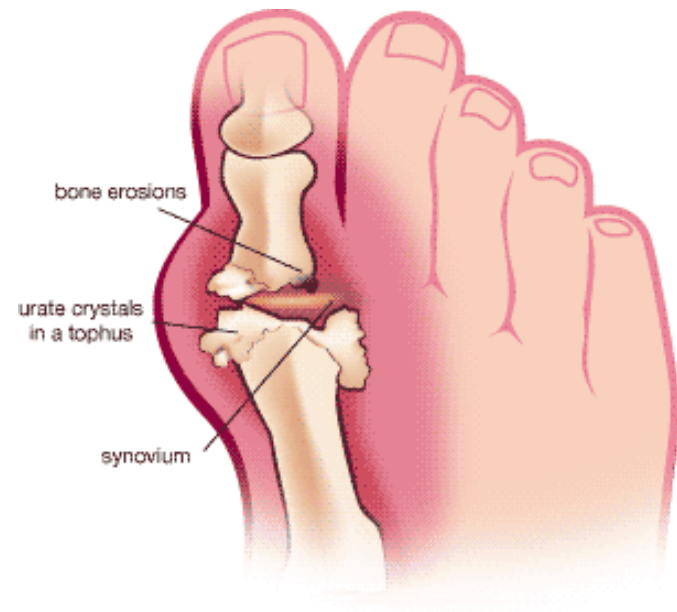
formation
of
uric acid
crystals

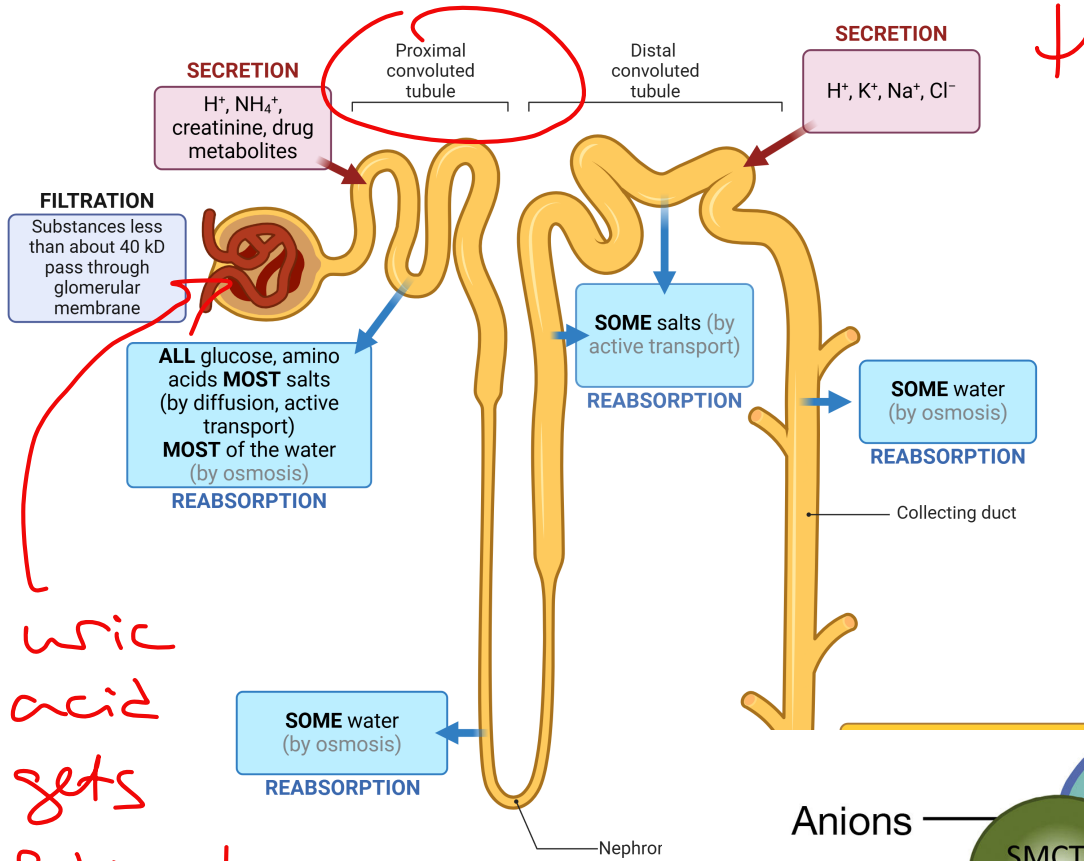


Goutta - drop of
liquid



usually affects
big toe



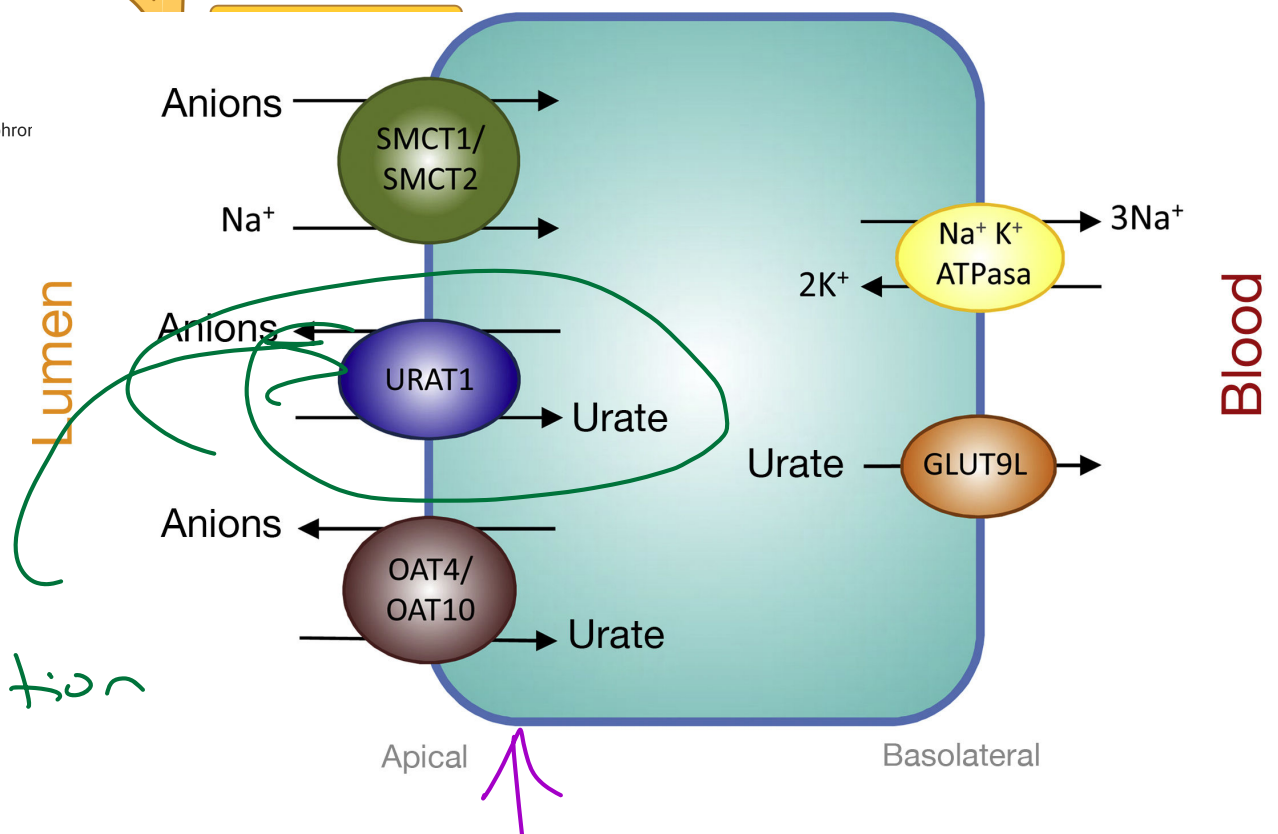


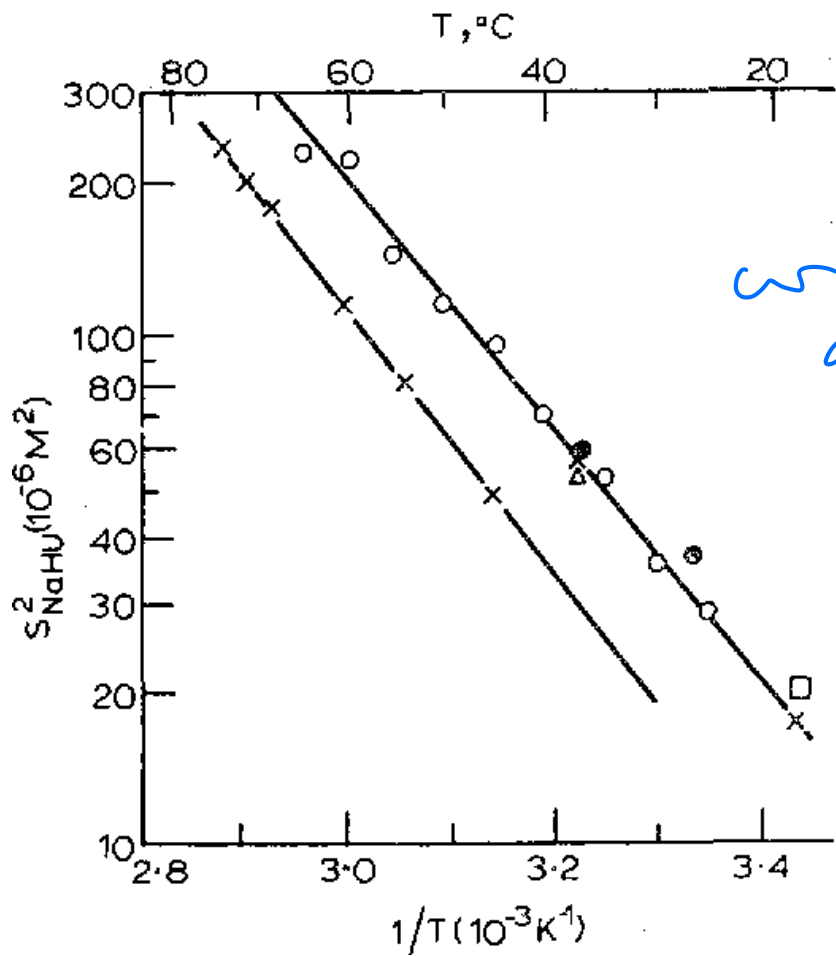
uric acid gets filtered out of blood

then reabsorbed in proximal tubule

* uric acid is antioxidant

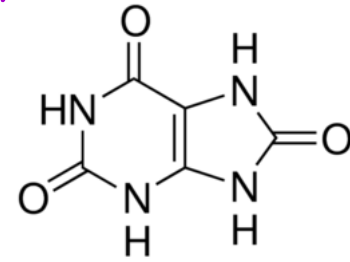
reabsorption





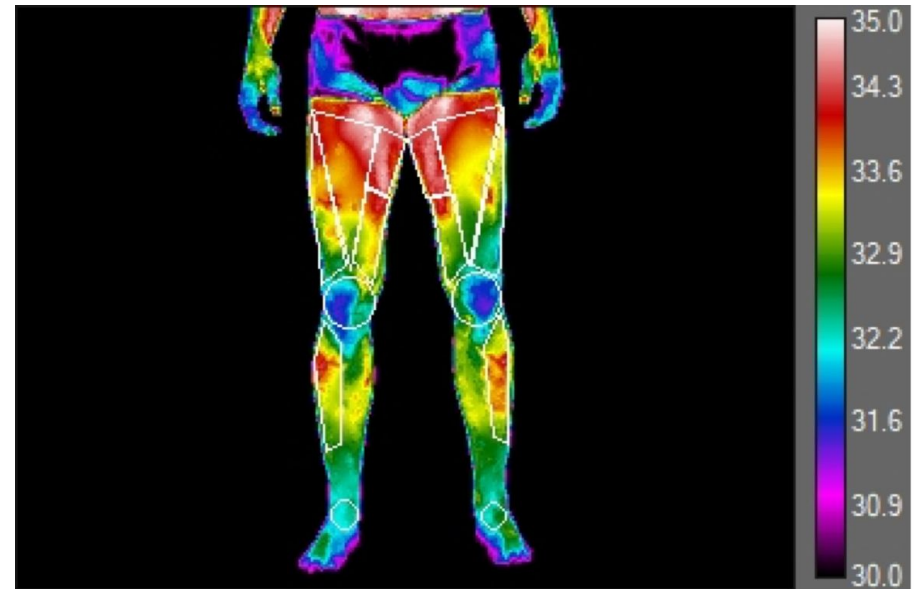
mutations /
i-transporters are genetic

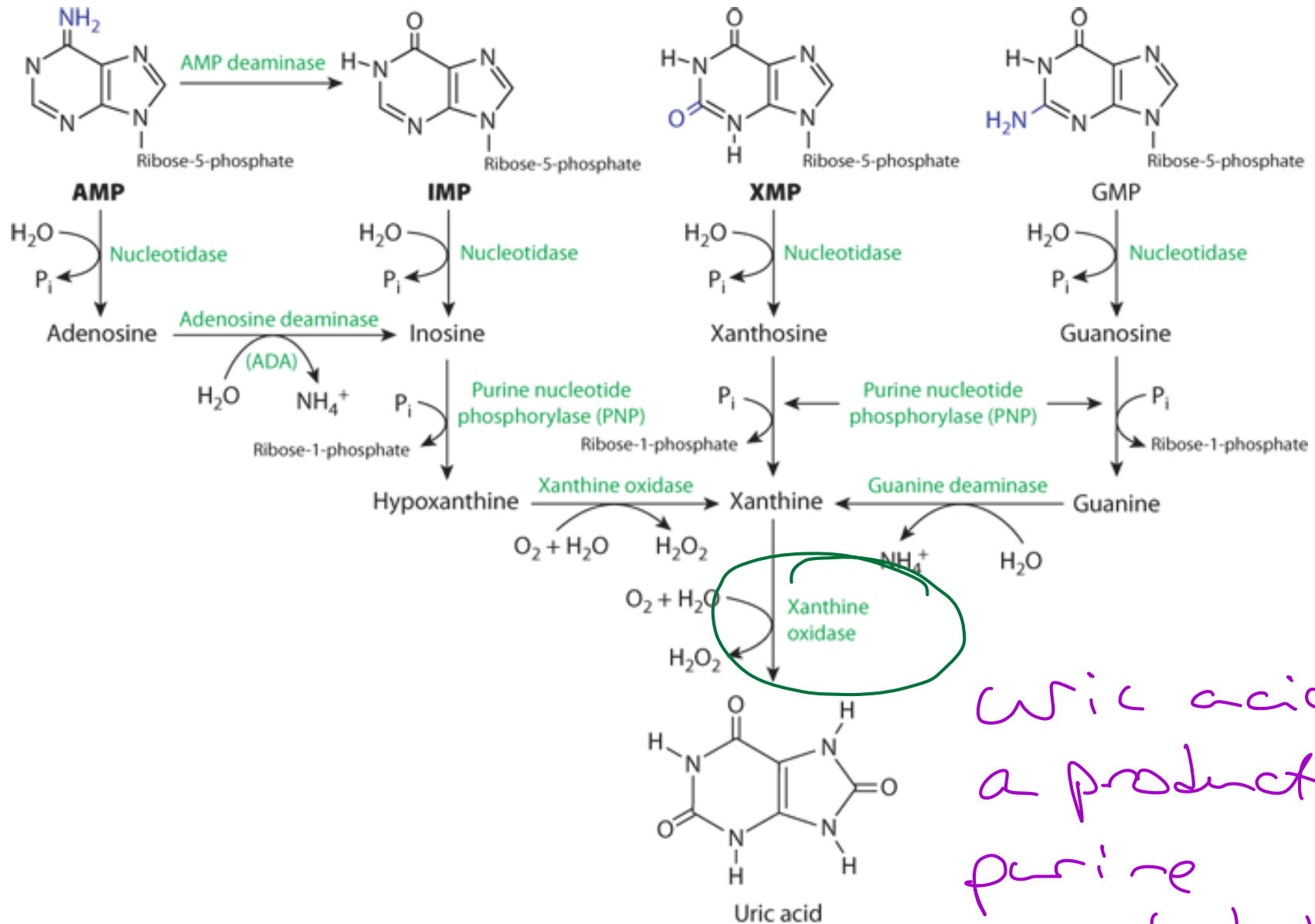
uric acid



Insulin increases rate of transporter transcription

- not very soluble
- crystallizes in cold areas





uric acid is a product of purine metabolism

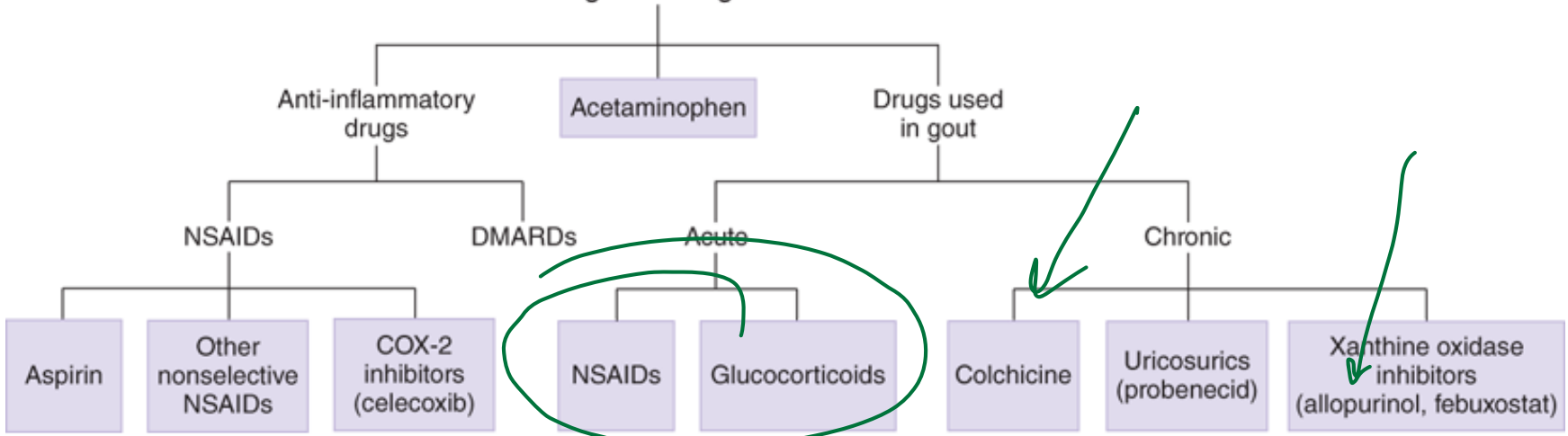
“Whoever suffers from gout or bad joints deserves it; because they eat what suits their appetite and they don't have a rule to use good food : and more than that they don't exercise (sic)” (Luis Lobera)

① decrease protein in diet

TABLE 3
Purine, RNA, and protein content of selected foods

	Adenine	Guanine	Hypoxanthine	Xanthine	Total purines	RNA	Protein
	mg/100 g						%
Organ meats							
Beef liver	62	74	61	0	197	268	20
Beef kidney	42	47	63	61	213	134	18
Beef heart	15	16	38	102	171	49	19
Beef brain	12	12	26	112	162	61	11
Pork liver	59	77	71	82	289	259	22
Chicken liver	72	78	71	22	243	402	20
Chicken heart	32	41	12	138	223	187	18
Lamb liver	32	43	54	18	147	88	22
Lamb heart	30	23	20	98	171	50	19
Fresh seafoods							
Anchovies	8	185	6	212	411	341	20
Clams	14	24	12	86	136	85	17
Mackerel	11	26	5	152	194	203	23
Salmon	26	80	11	133	250	289	23
Sardines	6	118	6	215	345	343	23
Squid	18	15	24	78	135	100	15
Canned seafoods							
Anchovies	0	39	14	268	321	6	30
Clams	30	5	7	20	62	44	20
Herring	15	180	6	177	378	82	17
Mackerel	23	109	16	98	246	122	26
Oysters	39	22	30	16	107	239	9
Salmon	23	39	13	13	88	26	26
Sardines	19	95	30	255	399	590	24
Shrimp	16	12	15	191	234	10	22
Tuna	27	13	11	91	142	5	29
Dried legumes							
Garbanza bean	17	14	18	7	56	356	21
Cranberry bean	21	19	23	12	75	248	17
Split peas	88	74	11	22	195	173	21
Red bean	54	51	15	42	162	140	20
Lentils	104	82	20	16	222	484	28
Blackeye peas	77	80	32	41	230	306	22
Large lima bean	42	41	14	52	149	293	21
Baby lima bean	46	39	25	34	144	190	19
Pinto bean	57	54	16	44	171	485	20
Small white bean	59	74	25	44	202	305	18
Great northern bean	56	68	25	64	213	284	18

Anti-inflammatory drugs, acetaminophen,
drugs used in gout

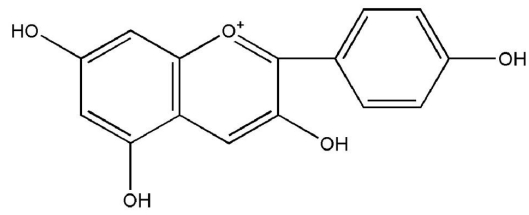


Source: A.J. Trevor, B.G. Katzung, M. Kruidering-Hall: Katzung & Trevor's Pharmacology: Examination & Board Review, 11th Ed. www.accesspharmacy.com Copyright © McGraw-Hill Education. All rights reserved.

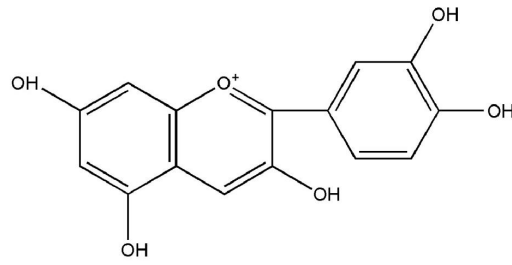
② antiinflammatories
(maybe not aspirin)

* this may be why
black cherry juice

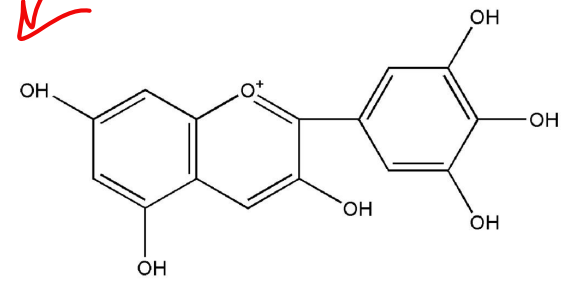
anthocyanins



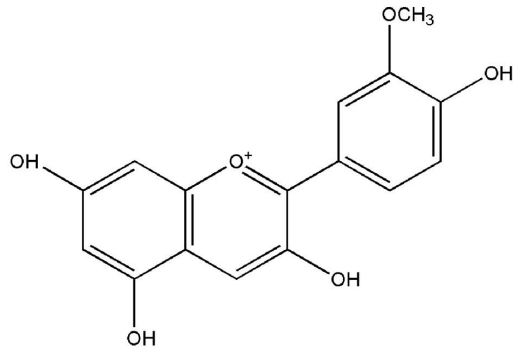
Pelargonidin



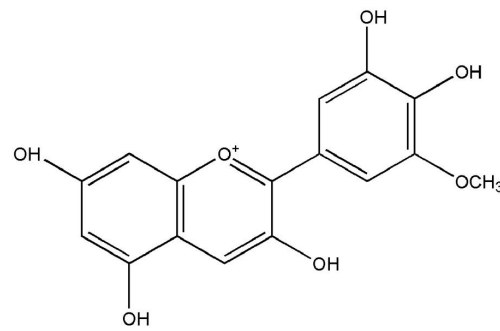
Cyanidin



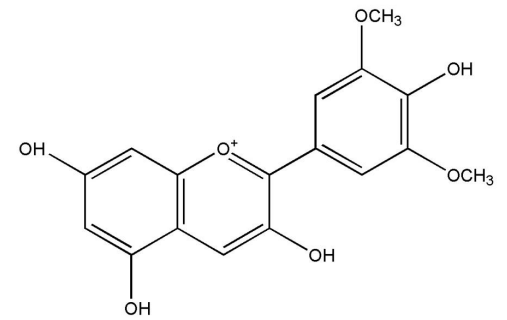
Delphinidin



Peonidin

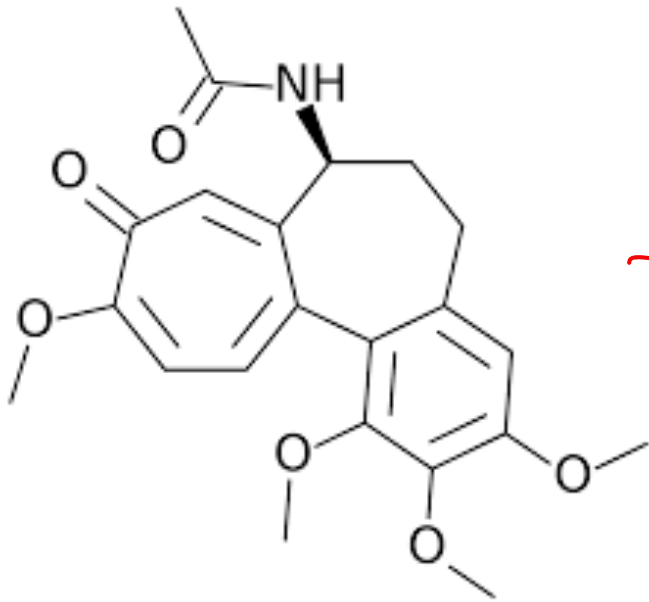


Petunidin



Malvidin

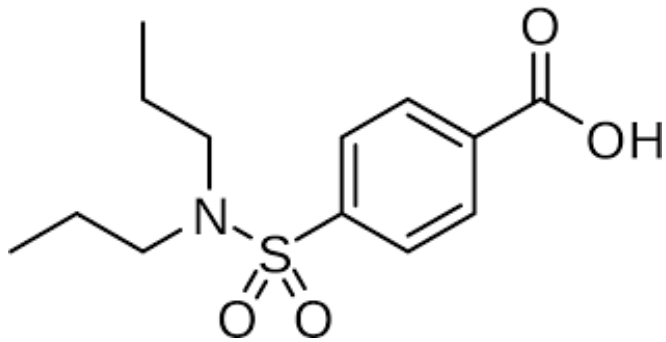
Colchicine : anti-inflammatory, *not* via arachidonic acid pathway



- inhibits microtubule formation in neutrophils

- also effects transcription rates

Uricosurics : act on renal tubules to increase rate of secretion of uric acid



Probenacid : blocks reabsorption of uric acid

Lesinurad URAT1 inhibitor

enzyme that makes uric acid

Xanthine Oxidase Inhibitors

most commonly used

