

## INDEX

## A

- accidents, nutrient-associated health risks 9
- acute respiratory distress syndrome (ARDS) 68
- adaptogens 33, 190
- aflatoxins 187
- Africa, diet 13
- ageing 142–4, 154, 287
  - and anti-oxidants 3, 286
  - and the brain 279, 286
  - delaying 2–5, 336–343
    - Q10 142–144
    - L-carnitine 142–144
  - in deprived areas 35
  - and diabetes 268
  - fatty acids and 130
  - free radicals and 46–7, 48–51, 141–144, 311, 338
  - role of lipofucsin in 46–7
  - skin 160–161, 308–312
  - see also* elderly, the; life, length of
- 'ageing pigment' *see* lipofucsin
- age-related cognitive decline (ARCD) 284–86, 289–90
- alcohol
  - and heart disease 227
  - high intake 88
  - and life expectancy 4, 5
  - and micro-nutrient requirements 24
  - nutrient-associated health risks 9
  - and osteoporosis 249
  - supplements for heavy drinkers 165
  - see also* wine, red
- alfalfa 255
- alkoxyglycerols 200
- allergies
  - and glucosamine 159
  - increase in 123
- almonds 121
- ALP 272–273
- alpha carotene 62, 206, 213
- alpha lipoic acid 67, 71, 271
- aluminium 239
  - and bone building 261–262
  - and the brain 279–282, 286, 295
  - daily intake 281
  - and silicic acid 279, 281
  - and the skin 160–161, 316
- aluminium hydroxide 281
- aluminium silicate 286
- alveolitis, fibrosing 72
- Alzheimer's disease 279–80
  - an inflammatory condition? 296
  - causes/risk 282–283, 291
    - aluminium 280, 295
    - circulatory 291
    - manganese depletion and axonal flow 292–295
    - oxidative damage 284, 285
    - stress 298
    - tropane alkaloids 295
    - zinc 295
  - and depression 36
  - and hydergine 294
  - protective factors
    - anti-oxidant enzymes 288
    - anti-oxidants 297–298
    - flavonoids 83, 296–297
    - hormonal 291
    - manganese 294
    - methyl groups/betaine 163–164
    - phospholipids 289–290
    - Q10 296
    - rosemary 297
    - supplements 296
    - tests for 298
- American Physicians trial 26
- amino acids 141, 236, 346
- amino sugars 152–161
- Amrit Kalash 3, 66
- Amyotrophic Lateral Sclerosis 285, 297
- anaemia 96, 242
- ancestors, human *see* man, primitive
- angina 231
  - treatment 236
    - fish oil 133
    - flavonoids 85
    - Q10 140, 144
- angiostats 98, 191, 196–9, 202–3, 213
  - see also* cartilage, shark; genistein
- Angiotensin Converting Enzyme 87
- anorexia, and osteoporosis 248
- antacids, aluminium-containing 281
- anthocyanidins *see* procyanidins
- antibiotics
  - and gut flora 106, 108
  - side effects 20
  - and Vitamin K deficiency 253
- antibodies 31

- athletes
    - and L-Carnitine 146
    - and Q10 145, 146
  - atoms, and free radicals 41
  - aubergines, skins 295
  - autism 300
  - auto-immunity *see* immune system
  - avenanthramides 214
  - axonal flow 292–94
  - Ayurveda medicine 3, 66, 240
  - B**
  - babies
    - infant foods 142, 300–311
    - and pre-biotics 107–8
    - see also* milk
  - baby food 7
  - bacteria
    - and free radicals 59
    - lactic acid 333
    - in the large bowel 105–6, 107, 190
  - bananas 214
  - basil 194, 195, 216
  - B cells 32
  - beans (legumes) 96, 213
  - beetroot 84
  - bergamot 315
  - beta amyloid 286
  - beta carotene 16, 65, 144
    - and arthritis 74
  - benefits 65
    - against cataracts 71
    - anti-cancer 211
    - in coronary artery disease 70
    - post-radiotherapy 62
  - caution in smokers 65, 182, 204, 211
  - in combination 65, 144
  - foods containing 65
  - intake 25
  - supplements 65
- beta casein 267
  - beta glucans 272
  - betaine 162–6, 215, 227, 236, 339, 350
    - anti-depressant 305
    - contra-indications 305
    - improving arthritis 158
    - preventing heart disease 230–232, 237, 241
    - SODA 348
  - bifidobacteria
    - in the gut 105, 106, 107–8, 109, 110, 190
    - oral 111
    - vaginal 110
  - bilberry 72, 86, 89, 93, 213
    - and the skin 314
  - bile acids, binding 109
  - bipolar illness 305
  - birth defects, and Vitamin A 76
  - birth weight, low 223
  - bitter aloes 273
  - bitter melon 273
  - blackcurrants 203, 314, 315
  - bleeding time 132
  - blindness 71–2
    - diabetic 88–9
  - blood, clotting *see* clotting
  - blood pressure
    - and exercise 227
    - and heart disease 227, 228
    - lowered by calcium 238
    - and salt 237, 291
    - see also* hypertension
  - body mass index (BMI) 170, 223
  - body shape 223
  - Bone Morphogenic Proteins (BMPs) 253
  - bones
    - building 250–253, 261
    - fractures 245–247, 250–251, 260
    - micro-structure 246
    - and pre-biotics 110
    - renewal
      - and glucosamine 155, 157
      - skeleton 155, 245
    - see also* osteoporosis
  - boron 261
  - Bovine Serum Albumen (BSA) 266
  - Bowman Birk compound 201, 203
  - brain function
    - axonal flow 292–94
    - in children
      - and breast-feeding 302–13
      - and formula milk 301, 302
      - micro-nutrients affecting intelligence 299–300
      - and mother's diet during pregnancy 302
    - damage to 283, 291
      - and aluminium 279–280, 284, 295
      - oxidative 130, 284–287
    - mood 140, 304–5
    - protective factors 290
      - anti-oxidants 48, 73, 284–87, 297–98
      - hormonal 291

- cancer, cont'd.  
 liver 108, 188, 216  
 lung  
   anti-cancer agents 96, 199, 204, 205, 209, 217  
   and beta carotene 204  
   and gender 36, 179  
   and iron 216  
   and smoking 223  
 mouth *see* oral cancer cavity/mouth  
 oesophagus 96, 188, 205  
 oral cavity/mouth 96, 188, 205  
 ovary 188  
 pancreas 96, 209  
 prostate 13, 97, 98, 188, 203, 206, 217, 218  
   and calcium/magnesium 259  
 redifferentiation of cancer cells (regression) 98,  
   191, 213  
 role of free radicals 45, 48  
 skin 36, 96, 101, 189, 310  
 and smoking 179, 187  
 spread (metastasis) 92, 93, 94, 200–1  
 stomach 36, 59, 101, 188, 205, 209  
 throat 205  
 upper respiratory tract 205  
 worldwide death rates from 14
- candida 110
- capsaicins, and weight loss 173
- captopril 196, 213
- carcinogens 193  
 and flavonoids 91  
 and phenolic compounds 97
- carnitine 140–150, 163  
 and ageing 49, 141–2  
 for athletes 146  
 and coronary heart disease 140, 144–5  
 and energy production 141  
 and infants 142  
 and infertility 140  
 and ME patients 145
- carnosic acid 81, 216, 333
- carnosol 333
- carotenoids 16, 26, 350  
 anti-cancer 203–6, 206, 207, 218, 341  
 are anti-oxidants 63  
 cardio-protective 204, 234, 241  
 in combination 45  
 depletion 22  
 high doses 212  
 intake 25  
 protecting the eyes 71, 204  
 and sunburn 312  
 types needed 62  
*see also* beta carotene; lutein; lycopene
- cartilage 153, 155  
 bovine 197, 198  
 shark 191, 196, 198–9  
 extract 98
- catalase 48–9
- cataracts 89, 228, 268–269  
 and anti-oxidants 68, 71
- catechins 81, 88, 126, 202  
 in tea 101
- cells 2  
 anti-oxidants inside 67–8  
 brain 293  
 contact inhibition 205  
 and free radicals 41–2, 44, 45, 46–7, 57, 58  
 membranes 127, 207, 209  
 and ageing 339  
 and brain function 287–8
- cembrenes 316
- centenarians 20, 21
- centrophenoxine 46, 130, 286
- cereals, breakfast 17, 330  
 pre-biotics in 112
- cerebral palsy 17, 298, 304, 330
- chelated minerals 64
- chemotherapy 208
- Chernobyl victims 88
- chewing gum  
 pre-biotic-loaded 111  
 with xylitol 147
- chicory root 106
- children  
 micro-nutrients for 299–300  
*see also* babies
- chilli 173
- China, heart disease in 99
- chitosan 272
- chlamydia 110, 225
- chlorogenic acid 81, 189
- chocolate, cardio-protective 101, 236
- cholesterol  
 and anti-oxidants 69–70  
 blood cholesterol in women 134, 228  
 cholesterol-lowering drugs  
   and L-carnitine 141  
   and Q10 141  
 and diabetes 270

- diabetes, avoidance, cont'd.
  - DHEA 258
  - flavonoids 88–9, 269
  - eye problems 70, 88–9, 269
  - and glycemic load 273
  - and glycosylation 268, 269
  - and heart disease 232
  - juvenile (Type 1) 266–267
- diallyl sulphide 92
- diesel fumes, and asthma 73–4
- diet
  - anti-cancer *see* cancer, anti-cancer diet
  - anti-asthma 321
  - anti-diabetic 275
  - anti-oxidants in the 58, 60, 67, 71
  - 'balanced' 7
  - cancer-causing 187
  - and fats/oils 121, 122–3
  - fatty 216
  - global 13–15
  - good for the heart 233–235
  - ideal 335
  - junk food 69, 321
  - modern 11–12
  - nutritionally deficient/depleted 22
  - percentage calories by source 11
  - universal 11
- diets/dieting/dieters
  - combined with exercise 169
  - low fat diets 70, 126, 129
  - micro-nutrient depletion 32
  - nutrient-associated health risks 9
- diosgenin 235, 342
- Diosmin 89
- diseases, degenerative 18–19
- DMAE 305
- DNA
  - and anti-oxidants 44, 45, 90, 91, 97
  - and free radicals 42, 43, 45, 46, 48, 90, 91
- docosahexaenoic acid (DHA) 119, 137, 301–3
- doctors
  - and nutrition 17
  - waging war on disease 18
- dopamine 284
- Down's Syndrome 286
- drinks, soft, and osteoporosis 248, 249
- drugs
  - anti-psychotic 73
  - 'magic bullet' 17–19
  - and diabetes 272
  - and osteoporosis 253
  - side effects 18, 20
- E**
- E470b 281
- Echinacea 33, 189, 191
- eczema 159
  - and fish oil 120
- EGCG *see* epigallocatechingallate
- eggs 116
  - cooking 125
  - powdered 124, 125
- eicosanoids 115, 117
- eicosapentanoic acid (EPA) 118, 119, 137, 302–3
- elagic acid 81, 92
- elastase 315
- elderberry 314
  - lectin 201
- elderly, the
  - benefits of anti-oxidants 48, 51
  - brain function 290
  - cells 144
  - and longevity 20–1
  - nutrient-associated health risks 9
  - 'rancidity' in 51
  - selenium-depletion 77
  - see also* ageing; centenarians
- eutherococcus 33, 340
- emphysema 136, 182
- energy
  - and Co-Enzyme Q10 141–2, 145
  - and L-Carnitine 141–2
- enzyme inducers 189
- enzymes
  - anti-oxidant 45, 48–9, 57, 59, 193–4
  - and the brain 288
  - and exercise 78
  - see also* super-oxide dismutase
  - Phase 1 and 2 194, 195, 214
- EPA *see* eicosapentanoic acid
- epicatechin 101
- epigallocatechin 101
- epigallocatechingallate (EGCG) 92, 101
- epinephrine 163
- Eskimos, diet 131–2
- Euramic Study 204
- evening primrose oil, in combination 47
- exercise 169, 170–2, 317
  - and anti-oxidants 78

- flavonoids, con'td.
    - SODAs 348,
    - sources 81, 82
      - chocolate 101
      - from organic foods 205
      - red wine 86–7
      - tea 100–1
    - types 83
  - flax oil 122–3
  - flaxseed oil 119
  - fluoride 263
  - flying, increased radiation from 192, 219
  - foetus
    - and aluminium 280-281
    - developing brain 302-304
    - and fatty acids 128, 129
    - and iron 239
    - see *also* pregnancy
  - folate 237
  - folic acid 7, 16, 164, 230, 237, 290, 300
    - anti-cancer 214, 215
    - intake 25
    - and schizophrenia 304
  - foods
    - 'functional' 101, 328–335
    - 'low/reduced' fat 122, 126
    - nutraceuticals from 337
    - organic see organic foods
    - fast/junk 4, 321, 323
  - FOS (Fructo-Oligosaccharide) 108, 109
  - FOSHU 332
  - France, diet 13
  - free radicals 40–52
    - and anti-oxidants 41, 43–52, 57, 58, 59, 60, 61, 62
    - damage caused by 42, 46–7, 59
      - ageing 46–7, 48–51, 142, 143, 338
      - brain damage 297
    - and exercise 49, 78
    - and smoking 43, 46, 179
  - French Paradox 13, 85
  - Fructo-Oligosaccharide (FOS) 108, 109
  - fruit and vegetables
    - absorption of micro-nutrients from 16
    - anti-cancer 90, 188, 189, 214–15
    - anti-oxidants from 49, 58, 234-235
      - ORAC scores 214
    - cardio-protective 234-235
    - carotenoids from 16
    - citrus fruit 236
    - flavonoids in 81, 82
    - green-leaf vegetables 13
    - organic 16
    - pre-biotics in 106
  - 'functional foods' 101, 328–35
  - fural glucitol 72
- ## G
- gamma interferon 33
  - gamma linolenic acid (GLA) 119, 210
  - gamma tocopherol 127
  - garlic 240
    - anti-cancer 92
  - gastroenteritis 111
  - genetics, and heart disease 222
  - genistein
    - anti-cancer 92, 94, 97, 98, 191, 196, 199, 202–3, 205, 213
    - cardio-protective role 100
    - from organic foods 205
  - ginger, and arthritis 74–5, 157
  - gingivitis 89
  - ginkgo 83, 86, 88, 203, 292
    - and asthma 322
    - prevents clotting 133
    - and the skin 314
  - ginseng, Siberian 33, 190
  - GLA (gamma linolenic acid) 119, 210
  - glucocorticoids 36, 299
  - glucosamine
    - and bone 250
    - and healing 154, 155–6, 158, 351
      - arthritis 156–7
      - food allergies 159
      - irritable bowel syndrome 159
      - skin complaints 159
    - SODA 348
  - glucosamine synthetase 154, 155
  - glucose
    - tolerance 173
    - in excess 268
  - Glucose Tolerance Factor (GTF) 271
  - glutamine 33, 154, 190
    - and intensive exercise 171
  - glutathione 45, 57, 67–8, 181
    - and the eyes 71
  - glutathione peroxidase 68, 130, 288
  - glutathione-S-transferase 181
  - glycemic index (GI) 272, 358-359
  - glycemic load (GL) 228, 269, 273, 358

- heart disease, risk factors, cont'd.
    - infection 228-229
    - lack of exercise 232
    - lipid oxidation products (LOPs) 47, 125, 231, 232
    - living in the developed West 232
    - low birth weight 223
    - saturated fats 232
    - smoking 223, 232
    - stress 36, 38
    - trans-fats 127-8, 227, 233
    - Vitamin B depletion 109
  - treatment
    - disease reversal 233, 236
    - Q10 144-5
    - L-carnitine 140, 144-5
  - worldwide
    - in Britain 13, 129
    - death rates from 14
    - Eskimos 131-3
    - Finland 240
    - the French Paradox 13, 85
    - low in Japan 114
    - low in Morocco 13
    - and Western diets 99
  - see also heart attacks
  - heart failure
    - treatment
      - hawthorn 87
      - Q10 20, 144-5
      - L-carnitine 144-5
  - heavy metal exposure, and selenium requirements 77
  - Helicobacter pylori 59, 111, 121, 228
  - hemp oil 119, 122-3, 137, 256
  - hempseed 137
  - herbs
    - anti-cancer 215-16
    - anti-COPs/LOPs 126
    - for asthma 322
    - for diabetics 273
    - and heart disease 240
    - and the immune system 33
    - traditional remedies 81
  - hesperidin 236
  - HIV infection 110
    - and flavonoids 82
    - and glutathione 68
  - homocysteine 162, 163, 164, 165, 227, 235, 237, 290
  - Hormone Replacement Therapy (HRT) 255-256, 291
    - and the skin 309
  - hormones
    - anti-ageing 337, 342
    - and osteoporosis 248, 252-255, 258
    - and sex drive 175, 178
  - horse chestnut seed extract 88
  - horsetail extract 161
  - HRT see Hormone Replacement Therapy
  - Huntingdon's disease 285
  - hydergine 294
  - hydrazine 212
  - hydrogenated oils see fats, trans-fats
  - hydrogen peroxide 212
  - hydrogen sulphide 112
  - hydroxycarotenoids 26
  - hydroxyl radicals 83
  - hydroxyproline 202
  - hypercholesterolaemia 100
  - hyperglycaemia 267, 268, 270
  - hyperhomocystenaemia 237
  - Hypericum 305
  - Hyper-T 292
  - hypertension 340
    - and Alzheimer's 291
    - and functional foods 329
    - and heart disease 229, 232, 238
    - and life expectancy 4
    - and salt 329
    - treatment, Q10 144
    - see also blood pressure
  - hypertriglyceridaemia 270
  - hypoglycaemia 173
    - transient 272
  - hypophysis 36
- I**
- illness, nutrient-associated health risks 9
  - immune system 30-9
    - auto-immunity
      - cartilage and 199
      - and diabetes 266
      - rheumatoid arthritis 158
    - and cancer 32, 94, 192
    - and excessive exercise 171
    - immunoregulation, and fish oil 120
    - immunosuppression, and anti-oxidants 76
    - improved 189-90
      - by anti-oxidants 76
      - by flavonoids 91, 94
      - by L-carnitine 142
      - by pre-biotics 110

- linseed 137
  - Linxian trial 187
  - Lipid Oxidation Products (LOPs) 46, 47
    - from fatty acids 123, 124–6
  - lipofuscin 46–7, 130, 286
  - lipoic acid 57
    - alpha lipoic acid 67, 71, 269
  - lipoprotein 127
  - liposome formula, sun lotion 312
  - liver, and anti-oxidants 70
  - liver/age spots 47, 130, 286
  - LOPs *see* Lipid Oxidation Products
  - LPL enzyme 270, 271
  - lutein 62, 72, 206
    - anti-cancer 219
    - and heart disease 26, 226, 234
    - intake 25
    - protecting the eyes 71
  - luteolin 202
  - lycopene 62, 72
    - benefits 13
      - against heart disease 26, 226, 232, 234
      - against radiation 61, 88
      - anti-cancer 6, 94, 204, 206, 207, 213, 218, 219
    - intake 25
  - lymphatic system 31
  - lymphomas 199
  - lysine 236
- M**
- macular degeneration 71, 72, 204
  - 'magic bullet' 17–19
  - magnesium 238
    - and asthma 74, 321
    - and diabetes 270
    - in foods 261
    - intake 282
    - and osteoporosis 250, 254, 260, 261, 263
  - malnutrition 6–8, 343
  - manganese 157, 251, 262
    - and Alzheimer's 292–295
    - foods containing 294
    - and nvCJD 295
  - mangoes 16
  - man, primitive 12
    - calorific intake 11
    - fat intake 117
    - flavonoid intake 83
    - Vitamin C intake 23, 64
  - margarines *see* spreads and margarines
  - matrix, extra-cellular 160
    - breakdown/repair 154, 155
    - and cancer 93, 195–6
    - and skin ageing 311–314, 316
    - stabilisers 191
  - Matrix Metallo-Proteases (MMPs) 93, 94, 195–6, 200–1, 202, 213
    - and the skin 311
  - meat 216
    - charred or browned 187, 216
    - cooking 216, 217
    - in hamburgers 126
  - medicines, anti-cancer 218
  - Melanocyte Stimulating Hormone (MSH) 310
  - melatonin 57, 68–9, 177, 219
  - menopause 175
    - nutrient-associated health risks 9
    - and osteoporosis 246, 255–258
    - smoking and the 246
    - see also* osteoporosis
  - menstrual cycle 256
    - and soy 98
  - menthol 228, 236
  - ME patients 145
  - Metabolic Syndrome 123
  - methionine 164
  - methyl groups 22, 162–6, 305, 348
  - micro-nutrients
    - absorption of 62
    - anti-oxidant 57
    - and life expectancy 5
    - necessity 12
    - optimal doses 26–7, 344–51
    - role of main nutrient groups 350–1
    - sub-optimal levels 16
    - symptoms caused by depletion 10
    - see also* supplements
  - milk
    - breast 107–8
      - and diabetes 266
      - fatty acids 122
      - and the infant brain 302–313
      - PCBs in 253
    - cows'
      - calcium from 110, 248
      - 'night milk' 69
      - risk factor for diabetes 266–267
    - formula 301, 302
  - milk thistle 80, 83, 86

- osteoporosis 244-265  
 development 19, 247-249  
 and the menopause 246-248, 255-257,  
 risk factors 247-249  
 depression 36, 249  
 smoking 179, 248  
 therapies 251-263  
 fish oil 136  
 flavonoids 90, 254-255  
 isoflavone 90, 254-255  
 hormones 255-258  
 minerals 259-262  
 pre-biotics 110  
 PUFAs 258-259  
 Vitamin K 251-253  
 see also bones  
 oxidation, and inflammation 294  
 'oxidative stress' 43, 46-7  
 oxygen, and free radicals 52  
 ozone hole 310
- P**
- pancreatitis, acute 20  
 PanSalt 238, 262, 329, 330  
 paraoxonase 85, 231, 232  
 Parkinsonism 281, 285, 297  
 and anti-oxidants 72-3  
 PCBs 252  
 PDCAAS (Protein Digestibility Corrected Amino Acid  
 Score) 95  
 peanut oil 126  
 pears, skin 33, 189  
 peas, garden 194  
 pecan nuts 137  
 pepper oils 130, 131, 281  
 peppers, red 194  
 peroxides, and diabetes 268-269  
 pessaries, pre-biotic 110, 111  
 pesticides, organo-phosphate (OPs) 253  
 pesto sauce 195  
 phenolic compounds 97, 226  
 phenylbutylnitron (PBN) 48  
 phosphatidyl choline (PC) 289, 290  
 phosphatidyl serine (PS) 289, 290  
 phospholipids 22, 163, 165, 207  
 and asthma 74, 322  
 and brain function 287-290  
 phosphoric acid 248  
 phytate 96  
 phyto-chemicals 26, 333  
 intake 25  
 see also carotenoids; flavonoids; isoflavones  
 phyto-estrogens see isoflavones  
 phytosterols 96  
 pigs, free range 62  
 Pill, the, nutrient-associated health risks 9  
 pine bark see pycnogenol  
 pinene 227  
 plants  
 anti-oxidants in 61, 62  
 defence mechanism 82  
 'polypharmacy' 331  
 polysaccharides, immuno-enhancers 189  
 polyuria 173  
 potassium 237-238  
 potatoes 214  
 skins 295  
 and diabetes 274, 275  
 'Pot of Immortality', ayurvedic 3, 66  
 pre-biotics 104-13, 173, 351  
 anti-cancer 108, 109, 215, 218, 219  
 depletion 22, 339  
 pre-eclampsia, toxic 75  
 pregnancy  
 aluminium antacids in 281  
 diabetes during 268, 271  
 diet, and the foetal brain 302-304  
 and iron 239  
 low birth weight 223  
 nutrient-associated health risks 9  
 and osteoporosis 244, 248-249  
 and potential schizophrenia 304  
 smoking during 179  
 supplements during  
 fish oil 134, 303  
 folic acid 7, 300-301  
 Vitamin A avoidance 76, 301  
 and trans-fats 128  
 see also foetus  
 preservatives, sulphite and sulphate 187  
 proanthocyanidins 202  
 procyanidins 81, 84-90  
 against cancer spread 93, 94  
 cardio-protective 85, 86, 87, 235-236  
 oligomeric (OPCs) 70, 296-7, 348  
 and skin protection 160  
 procyanidolic oligomers (PCOs) see procyanidins  
 Procysteine 68  
 progesterone 256-258  
 proline 202, 236  
 protease inhibitors 96, 190, 202, 205



- sexual activity 175–8, 183
  - and keeping young 2, 5
  - and skin care 313
- shark cartilage *see* cartilage, shark
- shark liver oil 199–200
- 'shields', health defence 342–343
- shrimp shell 153, 155
- silicates/silicic acid
  - binding to aluminium 279, 281
    - and osteoporosis 262
    - protecting the brain 282
  - in bone 262
  - and skin care 160–1, 316
- silicon
  - and aluminium 279, 281–2
  - depletion 22
- silybin 202
- skeleton, renewal 155
- skin
  - ageing 160–1, 308–12
  - care 89, 160–1, 312–19
  - complaints, and glucosamine 159
- skin, fruit/vegetable 82
- sleep
  - and melatonin 69
  - and skin care 316–17
- slow cooking, benefits of 323
- smoking/smokers 179–82, 183
  - anti-oxidant depletion 181–2
    - Vitamin C 23–4, 43, 179
  - beta carotene not for 65, 182, 204, 211
  - and cancer 179
  - and free radicals 43, 46, 179
  - and heart disease 223, 232
  - helped by fish oil 136
  - and life expectancy 4, 43
  - nutrient-associated health risks 9
  - osteoporosis in 179, 249
  - and supplements for 23–4, 43, 65, 124, 181
- social interactions, and life expectancy 5
- society, affecting life and health 34–8
- SOD *see* super-oxide dismutase
- SODAs (Suggested Optimum Daily Allowances) 24–25, 27, 28, 348–9
- sodium 257–258, 262
  - see also* salt
- soils
  - depleted in minerals 30
  - selenium-deficient 77
- soy products
  - anti-cancer 13, 94, 95–7, 98, 201, 202–3, 213, 218, 219
  - and brain function 291
  - and the menstrual cycle 98
  - and osteoporosis 260
  - protecting the heart 99–100, 333
  - soy oil 94, 95, 119, 127
  - supplements 346
- spices, and brain function 285
- spina bifida 7, 304
- spinach 71
- spreads and margarines
  - 'healthy' 126–8
  - storage 125
  - trans-fats 128, 129, 227
- statin, combined with Q10 146
- stearadonic acid 137
- steroids 252
- sterols 22, 33, 47, 322, 325
- sterolins *see sterols*
- stimulants, immune system 340
- stomach upsets, and stress 107
- Stone Age *see* man, primitive
- stooping 245
- stress 34
  - and ageing 3
  - and Alzheimer's 298
  - and heart disease 36, 38
  - and immuno-suppression 37, 190
  - and life expectancy 4, 5
  - and methyl groups 164
  - and osteoporosis 249
  - and stomach upsets 107
  - and wound healing 156
- strokes
  - and dementia 291
  - protective factors
    - anti-oxidants 234
    - exercise 171
    - fish oils 134
    - flavonoids 291, 296
    - and salt 237–238, 291
    - tannins 84
  - risk of 223, 291
  - and salt 330
  - worldwide death rates from 15
- Sudden Death Study 99
- sugar beet 165
- sugar craving 173

thermogenics 172–3  
 Third World, deaths 8  
 thrombosis 230, 236  
   thrombus 234, 238  
   and glucosamine 159  
   *see also* clotting  
 thrombospondin 94  
 thrush 110  
 thyme/thyme oil 73, 130–1, 287  
 thymol 46, 130  
 thyroid insufficiency 175  
 TNF alpha 148  
 TOKUHO 332  
 tomatoes 13, 72, 189, 218  
   cooked 206, 207  
   processed products 206, 218  
   *see also* chlorogenic acid; lycopene  
 trace elements  
   and anti-oxidant enzymes 45, 59, 338  
   chelated 64  
   essential 282  
   SODAs 348  
   soils depleted in 60  
   *see also* minerals  
 triglycerides 127, 134, 226, 227  
   and diabetes 270, 271  
   and heart disease 227, 228, 233, 240  
 tropane alkaloids 295  
 tropicamide 299  
 tumour necrosis factor alpha (TNF-alpha), inhibition 74–5  
 turmeric 71, 73  
   anti-cancer 92, 214  
   and asthma 322  
   and arthritis 74–5, 157  
   and skin care 160, 311  
   *see also* curcumin  
 tyrosine 178

**U**  
 ubiquinone *see* Q10, Co-Enzyme  
 ulcers 75, 111, 121  
 ultra-violet (UV) light, and ageing 160, 309  
 urinary tract  
   congenital disorders 304  
   infections and pre-biotics 110  
 urine, drinking own 69  
 UTI 110  
   *see* urinary tract infections

**V**  
 vaginal infections, and pre-biotics 110  
 vaginosis, bacterial 110  
 vanadium 273  
 vascular problems, and flavonoids 88  
 vegetables *see* fruit and vegetables  
 vegetarians 22–3  
   and cancer risk 188  
   and life expectancy 5, 58, 83  
   nutrient-associated health risks 9  
   and poly-unsaturates 122  
 veins, varicose 86, 88  
 venous problems 88  
 viruses, and flavonoids 82  
 Vitamin A  
   dosage 76  
   and pregnancy 301  
   and skin cancer 189  
   and skin care 315  
 Vitamin B 17, 164  
   anti-depressant 305  
   B6 164, 230, 233, 290  
   B12 164, 230, 290  
     and schizophrenia 304  
   cardio-protective 226–228, 237  
     depletion 24, 109, 290  
   *see also* folic acid; niacin  
 Vitamin C 15, 45, 63, 68, 69, 71, 72, 73, 74  
   benefits  
     against cataracts 71  
     against diabetes 268, 269, 271  
     against osteoporosis 248, 251  
     against radiation 62  
     against scurvy 23  
     cardio-protective 23, 70, 73, 233, 241  
     healing 69  
     and immunity 76  
     longevity 12  
     in the lungs 74  
     skin care 311–313, 315  
   in combination 45, 68, 70, 71  
   depletion/deficiency 22, 229  
     and fertility 77  
   in foods 65  
   and primitive man 23, 64  
   RDAs 23, 24, 25, 346, 348  
   and smokers/smoking 23, 43, 179  
   SODA 25, 26  
   supplements 64–5