

## **INDEX**



## INDEX

*The figures in bold type indicate the page numbers of chapters.*

- Acetylcholine, in experimental goitre, 292  
Acini, *see* Follicles  
ACTH, in experimental goitre, 298  
Adenomas, foetal, 331, 335  
    follicular, 331  
    Hürthle's oxyphilic, 334  
    macrofollicular, 333, 335  
    microfollicular, 333, 335  
    toxic, 344, 392, 397  
    (*see also* Thyrotoxicosis)  
    trabecular, 333  
    tubular, 333  
    (*see also* Nodules in the thyroid)  
Adenomatous goitre, *see* Nodular goitre  
Adolescent goitre, *see* Physiological goitre  
Adrenal glands, in experimental goitre,  
    292, 297  
Afghanistan, 153  
Africa, 114-148  
Air, iodine content, 21, 71, 353  
Albania, 85  
Algeria, 114-117  
Aluminium sulfate, as stabilizer for iodized  
    salt, 433  
America, 30-58  
Amino-acids, iodinated, 265, 357  
Anatomy of the thyroid, 16, 17, 315-317  
Angola, 131  
Animal goitre, 61, 84, 114, 143, 148, 160,  
    180, 182, 184, 197  
Antithyroid compounds, 66, 341, 356,  
    357-359  
    (*see also* Thyrostatic drugs)  
Argentina, 52-54  
Arteriosclerosis, relationship to goitre, 61  
Asia, 148-185  
Athyroidism, acquired, 249  
    congenital, 246-248  
Australia, 188-192  
Austria, 85-87  
Auto-immunization, in experimental goitre,  
    306-310  
Autonomic nervous system, in experimen-  
    tal goitre, 284-287  
Autoradiography, 328, 336, 342, 343  
Basal metabolic rate, in endemic goitre,  
    289, 293, 298, 303, 352  
    in experimental goitre, 352, 394  
Basutoland, 145, 146  
Bechuanaland, 145  
Belgian Congo, 138-142  
Belgium, 105  
Bismuth salts, effect on goitre, 398  
Blood-iodide level, 261  
    in experimental goitre, 288, 289, 293  
Bolivia, 48, 49  
*Brassica* genus, goitrogenic action, 66,  
    194, 195, 197, 269, 359-362  
Brazil, 55-58  
Bread, iodized, 69, 75, 190, 399, 411, 458  
Brine, iodization of, 423  
British Cameroons, 125  
British Somaliland, 137  
Bronchocele, 11  
Brussel sprouts, goitrogenic action, 359  
Bulgaria, 80, 81  
Burma, 163  
Cabbage, goitrogenic action, 66, 90, 91,  
    105, 281, 359, 381  
Calcium, goitrogenic action, 21, 92, 146,  
    267, 362, 398  
    in drinking water, 13, 20, 158, 362, 398  
    in soil, 21, 147, 158, 176, 362  
    (*see also numerous references in Kelly  
    & Snedden, pp. 27-233*)  
Calcium carbonate, as stabilizer for iodized  
    salt, 457  
Calcium chloride, as stabilizer for iodized  
    salt, 433  
Calcium oxide, as stabilizer for iodized  
    salt, 457  
Calcium phosphate, as stabilizer for iodized  
    salt, 422, 457  
Calcium stearate, as stabilizer for iodized  
    salt, 422  
Cambodia, 164  
Cameroun, 127  
Canada, 30-33  
Canary Islands, 118

- Cancer, 245  
of the thyroid, 244, 337, 397
- Caprivi strip, 131, 144
- Carbohydrates, 363
- Cathepsins, 264
- Cauliflower, goitrogenic action, 359
- Central America, 37-41
- Central nervous system, in experimental goitre, 280
- Ceylon, 161-163
- Cheiroline, goitrogenic action, 195
- Chile, 49-52
- China, 174-180
- Chloralose, in experimental goitre, 281
- Chlorpromazine, in experimental goitre, 282
- Chou-moellier, goitrogenic action, 66, 194, 195, 197, 269, 361
- Cobalt, goitrogenic action, 250
- Colloid, 237, 315, 323-326
- Colloid goitre, 236, 237, 322, 326
- Colombia, 41-45
- Congenital thyroid hypertrophy, 339
- Consanguinity, 20, 255
- Cook Islands, 199
- Cortisone, in experimental goitre, 309
- Costa Rica, 39
- Cretinism, 245-246  
classification, 246  
endemic, *see* Endemic cretinism  
familial goitrous, 248
- Cruciferae*, goitrogenic action, 195, 360
- Cuba, 40
- Cystic goitre, 390
- Cystic nodules, 328, 337
- Cytology of the thyroid, 315-317
- Czechoslovakia, 89-92
- Deaf-mutism, 247, 251, 256, 381  
(*see also numerous references in Kelly & Snedden, pp. 27-233*)
- Decortication, in experimental goitre, 282
- Degenerative changes in thyroid, 243, 390
- Denmark, 64-66
- Desoxycorticosterone, in experimental goitre, 298
- Diagnosis, 370, 371
- Diet, 66, 105, 159, 182, 381  
(*see also Malnutrition*)
- Diffuse goitre, 127, 370, 395
- Diiodotariric acid, 152
- Diiodothyronine, 264
- Diiodotyrosine, 261-264, 356, 357
- Dominican Republic, 40
- Drinking water, goitrogenic springs, 113, 117, 157, 170, 180  
hardness, 13, 20, 362, 398  
iodine content, 21, 320, 353  
iodization, 68, 399, 411  
lime content, 13, 20, 158, 362, 398  
pollution, 144, 157, 162, 364, 450  
salt springs, 173  
(*see also numerous references in Kelly & Snedden, pp. 27-233*)
- Dry-mixing process for iodization of salt, 421-423, 424-426
- Ecuador, 46
- Egypt, 131-133
- Eire, 111
- El Salvador, 38
- Electric shocks, in experimental goitre, 281, 282
- Endemic cretinism, 245, 250-256, 342, 344, 388  
classification, 251-253  
etiology, 254-256  
history, 13, 15, 19  
(*see also numerous references in Kelly & Snedden, pp. 27-233*)
- Endemic goitre, age of onset, 235  
classification, 342, 374-376  
control, **443-452**  
definition, 320  
international collaboration, 447-449  
research, 450, 451  
surveys, *see* Surveys of endemic goitre  
(*see also* Etiology; History; Prophylaxis; etc.)
- Endocrine system, in experimental goitre, 295-304
- England and Wales, 105-109
- Epidemic goitre, 239, 342
- Eritrea, 137
- Estonian SSR, 66
- Etiology, of endemic cretinism, 254-256  
of endemic goitre, 20, 157-160, **351-368**
- Ethiopia, 136
- Europe, 59-114
- Euthyroidism, in goitrous subjects, 237, 242, 344
- Exophthalmic goitre, 18, 90  
(*see also* Thyrotoxicosis)
- Experimental goitre, **279-213**, 341, 352
- Familial goitrous cretinism, 248
- Fats, goitrogenic action, 188, 363
- Fiji Islands, 199

- Finland, 59-62
- Fluorine, goitrogenic action, 88, 145-147
- Fluorosis, association with goitre, 100, 118, 124, 159
- Foetal adenomas, 331, 343
- Follicles, 315, 317, 357  
changes in, 236, 237  
in experimental goitre, 281, 285, 294, 303, 307, 309
- Folliculin, 139, 341
- Food, goitrogens in, 239, 269, 341, 356, 359-362, 381, 390, 398, 450  
indirect goitrogenic effects, 362  
iodine content, 21, 353  
(*see also* Diet; Malnutrition; and numerous references in Kelly & Snedden, pp. 27-233)
- France, 112-114
- French Equatorial Africa, 126-131
- French West Africa, 118-122
- Friendly Islands, 199
- Gambia, 122
- Geochemistry of iodine, 27, 71, 77, 185
- Geographical distribution, 27-233
- Geological features, relation to goitre, 27, 28, 84, 100, 120, 123, 125, 140, 161, 168, 197
- Germany, 92-95
- Ghana, 124
- Goitrin, 360
- Goitrogenesis, 236-238, 321-326, 351, 370
- Goitrogens, 60, 341, 356-357  
epidemiological studies, 361  
experimental studies, 359-361  
in food, *see* Food, goitrogens in
- Graves' disease, *see* Thyrotoxicosis
- Greece, 85
- Groundnuts, goitrogenic action, 359
- Growth retardation, in cretins, 249, 251
- Guatemala, 37
- Haemangio-endothelioma of the thyroid, 337
- Hawaiian Islands, 199
- Health significance of endemic goitre, 235-277
- Histoautoradiography of the thyroid, 328, 336, 342, 343
- Histochemical analysis of thyroid tissue, 336
- Histology of the thyroid, 315-317  
changes in, 317, 336, 339
- Histology of the thyroid (*continued*)  
in experimental goitre, 281, 285-287, 294, 303, 306-310, 342
- History of goitre, 9-25, 385-389
- Honduras, 38
- Hormones,  
in experimental goitre, 298-304, 309  
influence on thyroid activity, 341
- Hungary, 87-89
- Hürthle's oxyphilic adenomas, 334
- Hürthle's oxyphilic cells, 330
- Hyperplastic phase of goitre, 236
- Hyperthyroidism, 89, 94, 180, 344, 397  
(*see also* Thyrotoxicosis; Jod-Basedow)
- Hypophysis, *see* Pituitary gland
- Hypothalamus, 236
- Hypothyroidism, 18, 243, 344  
acquired, 249  
post-operative, 397  
treatment, 389, 394, 395
- Iceland, 59
- Idiocy in cretins, 38, 79, 95, 103, 157, 247, 257
- Immunopathology, in experimental goitre, 304-310
- Indian peninsula, 153-161
- Indo-China, 164-166
- Indonesia, 167-173
- Infection theories of goitrogenesis, 16, 129, 130, 364
- Innervation of thyroid, in experimental goitre, 287-290
- Intermarriage, *see* Consanguinity
- Iodide concentration in the blood, *see* Blood-iodide level
- Iodide trapping by the thyroid, 236, 262, 263
- Iodine, determination in common salt, 438  
determination in iodized salt, 437, 438  
discovery, 21, 385  
geochemistry, 27, 71, 77, 185  
in air, 21, 71, 353  
in food, 21, 353  
in soil, 21, 27, 320, 353  
in water, 21, 320, 353  
mean daily intake, 60, 261, 436  
release from thyroid, 261-266, 274, 356
- Iodine acne, 446
- Iodine compound for iodization of salt, 401, 424, 433-435
- Iodine deficiency, 21, 267-276, 320, 351-356, 390  
assessment, 370, 374

- Iodine deficiency (*continued*)  
 in experimental goitre, 298-304  
*(see also numerous references in Kelly & Snedden, pp. 27-233)*
- Iodine metabolism, 261-266, 274, 356
- Iodine prophylaxis, 239, 398-407  
 administrative problems, 36, 446, 447  
 complications, 404  
 cost, 447, 454  
 effect on weight and structure of thyroid, 339  
 history, 21-33, 43, 386-388, 412, 443  
 indications, 402, 403  
 legislation, 446, **453-462**  
*(see also Iodized bread; Iodized salt; etc.; and numerous references in Kelly & Snedden, pp. 27-233)*
- Iodine requirements, 354, 400, 436
- Iodine therapy, 239, 390-394  
 complications, 21, 391  
 dosage, 21, 390, 391  
 history, 21, 385
- Iodine thyroiditis, 393
- Iodine uptake by the thyroid, 267-272, 354, 403  
 influence of chlorpromazine, 282  
 influence of hormones, 299-304  
 influence of Novocaine, 287-304
- Iodism, 392, 404
- Iodized bread, 69, 75, 190, 399, 411
- Iodized chocolate, 58, 101, 107, 411, 458
- Iodized milk, 411
- Iodized oil, 179, 188, 411
- Iodized salt, 21-23, 339, 353, 378, 399-407, **411-441**  
 control of iodization, 458  
 cost, 447, 454  
 determination of iodine content, 437  
 distribution, 447  
 history, 43, 386-388, 443  
 iodization processes, 414-431  
 legislation, 446, **453-462**  
 level of iodization, 399-401, 436, 456, 457  
 objections, 444-446  
 packing and labelling, 419, 432, 433, 459  
 safety, 445  
 stability, 431-435, 449  
 stabilization, 421, 422, 433, 456, 457  
 storage, 424, 432, 458  
*(see also numerous references in Kelly & Snedden, pp. 27-233)*
- Iodized sweets, 36, 53, 107, 399, 458
- Iodized tablets, 163, 190, 192-194, 399, 411
- Iododerma, 446
- Iodostarin, 152
- Iran, 153
- Ireland, 111
- Iso-immunization, in experimental goitre, 305-310
- Isothiocyanates, goitrogenic action, 195
- Israel, 152
- Italy, 97-101
- Japan, 182-184
- Jod-Basedow, 386, 390, 392, 404, 445
- Kale, goitrogenic action, 66, 194-197, 269, 361
- Kashmir, 154-157
- Korea, 180
- Laos, 164
- Latvian SSR, 66
- Lebanon, 151
- Legislation on iodine prophylaxis, 446, **453-462**
- Lime, *see* Calcium
- Lithuanian SSR, 66
- Lobectomy of the thyroid, in experimental goitre, 297
- Lobules of the thyroid, 315, 328  
 excision, 297
- Madagascar, 148
- Madeira, 118
- Magnesium carbonate, as stabilizer for iodized salt, 421, 456, 457
- Magnesium chloride, as stabilizer for iodized salt, 433
- Malaya, 166
- Malnutrition, role in goitrogenesis, 47, 49, 94, 100, 137, 450  
*(see also Diet; Food)*  
 effect on thyroid, 340
- Malta, 101
- Mass prophylaxis, *see* Iodine prophylaxis
- Menarche, effect on thyroid, 241
- Menopause, effect on goitre, 344
- Menstruation, effect on thyroid, 241, 341
- Mental deficiency, *see* Idiocy in cretins
- Mental retardation, in cretins, 249, 251  
*(see also Idiocy in cretins)*  
 in goitrous persons, 44, 58, 63, 95, 403
- Methimazole, effect on iodine metabolism, 274
- Methylthiouracil, in experimental goitre, 282, 285
- Mexico, 35-37

- Microfollicular hyperplasia, in experimental goitre, 281, 303
- Milk, goitrogens in, 66, 194, 361, 450  
iodine content, 60, 354  
iodization, 411
- Monoiodothyronine, 264
- Monoiodotyrosine, 263, 264, 356, 357
- Morocco, 117
- Mustard seed, goitrogenic action, 359
- Myxoedema, *see* Hypothyroidism  
congenital, 246-248
- Natural history of endemic goitre, 235-245
- Nepal, 154, 159, 160
- Netherlands, 67-70
- Neurosis, in experimental goitre, 281, 282
- New Guinea, 187, 188
- New Zealand, 196-198
- Nicaragua, 39
- Nigeria, 124-126
- Nodular goitre, 61, 127, 242, 321, 326-339, 370, 395  
effect of iodine prophylaxis, 406  
(*see also* Nodules in the thyroid)
- Nodules in the thyroid, 242, 321, 326-339, 370  
autoradiography, 328  
benign development, 337  
classification, 333  
cystic, 328, 337  
distribution, 331  
frequency, 330  
histology, 335  
in cretins, 342  
macrofollicular, 333, 335  
malignant development, 336  
microfollicular, 333, 335  
pathogenesis, 326-330  
pathology, 332  
regressive, 331, 333  
relationship to puberty, 327
- Non-visible goitre, 371
- North Borneo, 172
- Northern Ireland, 110
- Northern Rhodesia, 142
- Norway, 63
- Novocaine, in experimental goitre, 287-293
- Oestradiol, in experimental goitre, 298
- Open-pan process for iodization of salt, 413, 423
- Pakistan, 153-161
- Palpation of goitre, 373-375
- Panama, 40
- Paraguay, 54
- Parasympathectomy, effect on thyroid metabolism, 284-287
- Pathogenesis of goitre, 321-326, 351, 370
- Pathogenesis of the thyroid nodule, 326-330
- Pathological anatomy of endemic goitre, 315-368
- Perchlorates, effect on iodide trapping, 263, 358
- Peru, 47
- Philippine Islands, 184
- Phosphorus uptake, of the adrenals, 292  
of the pituitary, 292
- Physiological goitre, 339, 370, 403
- Physiology of endemic goitre, 261-277  
history, 17, 18
- Pineal extract, in experimental goitre, 298
- Pituitary gland, 236, 266, 351  
in experimental goitre, 287, 292, 297, 359
- Plummer's disease, *see* Thyrotoxicosis;  
Toxic adenoma
- Poland, 70-73
- Portugal, 104
- Potassium chloride, as stabilizer for iodized salt, 433
- Potassium iodate, for iodization of salt, 407, 424-426, 432, 433-435, 449, 457
- Potassium iodide, effect on iodine uptake, 270  
for iodization of salt, 415-435, 449, 456, 457  
comparison with potassium iodate, 407, 433-435, 449  
prophylaxis with, 152, 361, 387, 400-402, 404  
therapy with, 391
- Pregnancy, effect on thyroid, 341, 394
- Prevalence of endemic goitre, 10, 14, 19, 20, 27-233  
in children, 238
- Prevention, *see* Prophylaxis
- Procaine, *see* Novocaine
- Progoitrin, 360
- Prophylaxis of endemic goitre, 398-407  
history, 386-388  
(*see also* Iodine prophylaxis)
- Protein-bound iodine, 265, 267, 355, 394
- Protein deficiency, 363
- Pseudoadenomas, 332
- Puberty, effect on thyroid, 339, 341  
relationship to nodular goitre, 327

- Radioactive iodine, uptake tests, *see* Iodine uptake by the thyroid
- Radioactivity of soils, 88
- Rainfall, 71, 139, 140, 161, 162, 187, 191
- Rape seed, goitrogenic action, 359
- Regressive nodules, 331
- Resorcinol, goitrogenic action, 361
- Rocks, composition, *see* Geological features
- Romania, 78-80
- Ruanda-Urundi, 140
- Rubber, intrathyroid injections in experimental goitre, 293-295
- Salt, iodized, *see* Iodized salt
- crystalline, 424-431
- extraction and refining, 414
- free-running, 414, 416-423
- iodine-rich, 173, 177
- iodization processes, 171, 414-431
- Sarawak, 173
- Sardinia, 97, 101
- Scotland, 109
- Scrofula, 17
- Sea sponges, 10, 12, 21, 385
- Seaweed, 9, 10, 21, 182, 385
- Sequelae of goitre, in adults, 242-245
- in children, 239-241
- in progeny of goitrous parents, 245-257
- Serum-precipitable iodine, 265, 267, 355, 394
- Seychelles, 148
- Sicily, 100
- Sierra Leone, 122-124
- Simple goitre, 182, 370
- Sodium bicarbonate, as stabilizer for iodized salt, 421, 457
- Sodium carbonate, as stabilizer for iodized salt, 422
- Sodium iodate, for iodization of salt, 457
- Sodium iodide, for iodization of salt, 457
- prophylaxis with, 152, 387, 400, 401, 443
- Sodium sulfate, as stabilizer for iodized salt, 433
- Sodium thiosulfate, as stabilizer for iodized salt, 421, 422, 456, 457
- Soil, composition and geological characteristics, 27, 84, 100, 120, 123, 125, 140, 161, 168, 197
- iodine content, 21, 27, 112, 320, 353
- (*see also various other references in Kelly & Snedden, pp. 27-233*)
- lime content, 147, 158, 176, 362
- radioactivity, 88
- Solitary nodules, 331
- Southern Rhodesia, 143
- South-West Africa, 144, 145, 148
- Soya flour, goitrogenic action, 66, 359
- Spain, 101-104
- Sponges, in the treatment of goitre, 10, 12, 21, 385
- Sporadic goitre, 236
- treatment, 394
- Spraying process for iodization of salt, 416-421, 426-431
- Sterility, association with goitre, 139, 141
- Sudan, 133-136
- Superstitions relating to goitre, 13, 17
- Surgical treatment of goitre, 12, 389, 396
- (*see also* Thyroidectomy)
- Surveys of endemic goitre, 369-383
- organization, 376-377
- selection of sample, 378-380
- tabulation of data, 380
- technique, 369-383
- (*see also* Prevalence of endemic goitre)
- Swaziland, 145
- Sweden, 62
- Swedes, goitrogenic action, 359
- Switzerland, 95-97
- Sympathectomy, effect on thyroid metabolism, 284-287
- Taiwan, 180-182
- Tanganyika, 138
- Tasmania, 192-196
- Testosterone, in experimental goitre, 298
- Tetany, hypoparathyroid, 397
- Thailand, 164
- Therapy of endemic goitre, 390-398
- history, 385-389
- iodine, *see* Iodine therapy
- Thiocyanate, effect on iodide trapping, 263, 358
- relationship to goitre, 90
- Thioglycosides, goitrogenic action, 195
- Thiouracil, effect on thyroid metabolism, 358
- (*see also* Methylthiouracil)
- Thiourea, effect on thyroid metabolism, 358
- Thymus extract, in experimental goitre, 298
- Thyroglobulin, 357
- composition of, 264
- treatment with, 89, 240
- Thyroid, anatomy, 16, 17, 315-317
- blood supply, 17, 316
- chromatographic analysis, 336
- congenital hypertrophy, 339

- Thyroid, anatomy (*continued*)  
 excision, *see* Thyroidectomy  
 follicles, *see* Follicles  
 function, 17, 18, 261-277  
 Golgi apparatus, 316  
 growth, 317  
 histoautoradiography, 323, 336, 342, 343  
 histochemical analysis, 336  
 histology, *see* Histology of the thyroid  
 iodine content, 272  
 lobules, 297, 315, 328  
 mitochondria, 316  
 palpation, 373-375  
 size, 372  
 weight, 315, 317-320, 339, 404-406
- Thyroid aplasia, congenital, 246-248
- Thyroidectomy, 10, 18, 389
- Thyroid hormones, 22, 264-267, 355  
 circulating, 265  
 formation, 264  
 regulatory effect, 266  
 storage and release, 264  
 turnover, 266, 273
- Thyroid hyperplasia, 236
- Thyroiditis, immunity, 306  
 iodine, 393
- Thyroid nodules, *see* Nodules in the thyroid
- Thyroid/plasma ratio, 262
- Thyroid preparations, 10, 240, 271, 388, 394-396  
 dosage, 395
- Thyroid-stimulating hormone, 236, 262, 266, 274, 351  
 in experimental goitre, 398  
 in treatment of goitre, 398
- Thyrostatic drugs, goitrogenic action, 341, 357-359
- Thyrotoxicosis, 65, 90, 105, 117, 136, 142, 147, 150, 271, 273  
 (*see also* Exophthalmic goitre)  
 secondary, 243, 344, 397  
 (*see also* Jod-Basedow)
- Thyrotropic hormone, *see* Thyroid-stimulating hormone
- Thyrotropin, *see* Thyroid-stimulating hormone
- Thyroidine, 22
- Thyroxine, 22, 261, 264, 266, 271, 282, 306, 351, 357  
 treatment with, 340, 396
- Tibet, 154
- Tonga, 199
- Toxic adenoma, 344, 392, 397  
 (*see also* Thyrotoxicosis)
- Toxic goitre, *see* Thyrotoxicosis
- Trabecular adenomas, 333
- Trapping of iodide by the thyroid, 236, 262, 263
- Treatment, *see* Therapy of endemic goitre
- Triiodothyronine, 261, 264, 266, 271, 357, 396
- Tubular adenomas, 333
- Tumours of the neck, 9, 11
- Turkey, 150
- Turnips, goitrogenic action, 117, 359
- Turnip weed, goitrogenic action, 195
- Union of South Africa, 143-148
- Uruguay, 54
- USA, 33-35
- USSR, 73-78
- Vacuum process for iodization of salt, 414, 415
- Venezuela, 45
- Viet Nam, 165
- Vitamin A, deficiency, 94, 124, 163  
 thyroxine antagonism, 363, 381
- Vitamins, 137, 363
- Water, *see* Drinking water
- Yemen, 150
- Yugoslavia, 81-85

