INDEX

Note: page numbers in *italic* typeface indicate figures. Page numbers followed by a "t" indicate tables. Abbreviations are for terms listed on pages 135-137. Acetaminophen/tramadol in fibromyalgia, 95, 96 Acupuncture, 101t, 106-107 Adverse events pooled data: treatment-emergent adverse events reported by >5% of patients in the duloxetine group and twice the rate of placebo, 82, 87 in pooled trials with pregabalin, 78, 80-81 Aerobic exercise guidelines in fibromyalgia, 100, 103t American College of Rheumatology diagnostic criteria for fibromyalgia, 13, 18-25, 19 Amitriptyline, 84-85, 91t, 92 combination treatment of fibromyalgia with fluoxetine and amitriptyline, 89, 93 initial prescription for, 120 Analgesic activity, alterations in descending, 57, 58t Analgesics used in fibromyalgia trials, 71t Antidepressants used in fibromyalgia therapy, 121 used in fibromyalgia trials, 71t Antiepileptics used in fibromyalgia trials, 71t Anti-inflammatory medications, 92, 94t Anxiety disorders co-occurrence with fibromyalgia, 41, 43t, 114 and duloxetine, 82 Autonomic dysfunction, 63 Balneotherapy (medicinal bathing), 101t, 106 Bipolar disorder, 44 Brain accelerated gray matter loss in fibromyalgia, 59, 62-63 brain regional blood flow response to pain in fibromyalgia vs controls, 58, 59, 60-61 neuroimaging in fibromyalgia, 59, 61t neurostimulation, transcranial direct current stimulation (tDCS), 101t, 106, 109 transcranial magnetic stimulation (rTMS), 109 Brief Pain Inventory (BPI), 78, 79, 82

11

Cardiovascular exercise, 99, 100-103 Carisoprodol used in fibromyalgia trials, 71t Central nervous system active medications used in fibromyalgia, Rationale for, 70t pain dysregulation, 53, 54t, 57-59, 58. See also Pain. Chemical sensitivity, multiple (MCS), 32, 36 Chiropractic therapy, 107 Chlorimipramine, 92 Chronic fatigue in the general population, 32recommendations for the evaluation and classification of unexplained chronic fatigue, 33, 34, 35 Chronic fatigue syndrome diagnostic criteria, 31, 33 history of, 33 Citalopram, 89, 92 Clinical diagnosis of fibromyalgia, 17-30 Cognitive behavior therapy and education in fibromyalgia, 106, 107 goals and methods of, 104, 105t improvements with, vs standard care over 12 months, 105 as treatment, 99, 100t, 101t, 104-106, 109t Cognitive problems in fibromyalgia, 22, 46t, 47, 47t Cyclobenzaprine used in fibromyalgia trials, 71t Cvtokines, 63

Depression, 32, 36, 44t comorbid with fibromyalgia, 41, 42, 43, 114 and duloxetine, 82 strategies to achieve improvement in comorbid major depression and fibromyalgia, 125t Dextromethorphan, 93, 94 Disability, 131-132, 132t Dolorimeter, 20 Duloxetine, 69 ≥50% improvement in average pain scores with duloxetine in 3- and 6-month treatment phases, 82, 88 clinical trials in fibromyalgia, 79, 83t improvement in average pain severity with duloxetine, 79, 84 improvement in function (FIQ) with duloxetine, 79, 85 initial prescription for, 120 pooled data: duloxetine efficacy in fibromyalgia patients with and without major depressive disorder, 82, 86

Duloxetine (continued) pooled data: treatment-emergent adverse events reported by >5% of patients in the duloxetine group and twice the rate of placebo, 82, 87 Education benefits of exercise enhanced by self-management education, 106, 108 cognitive behavior therapy and education in fibromyalgia, 106, 107 disability avoidance, 131-132, 132t explaining the typical outcome in fibromyalgia, 118t patient and family education, 114-119, 116t spontaneous remission of fibromyalgia, 119, 131 structuring group fibromyalgia education, 116t web sites with fibromyalgia information, 118 Electrotherapy, 107 EMG biofeedback, 101t, 106 Epstein-Barr virus, 33 Etiologic links, possible, between mood disorders and fibromyalgia, 51t European Union League Against Rheumatism (EULAR) conclusions regarding nonmedicinal therapy, 109, 109t recommendations for management of fibromyalgia, 126t Exercise aerobic exercise guidelines for fibromyalgia patients, 100, 102, 103, 103t aerobic exercise vs untreated controls: mean differences. 100, 102, 106, 107 benefits of exercise enhanced by self-management education, 106, 108 benefits of exercise to the fibromyalgia patient, 99-112 cardiovascular exercise, 99, 100-103 exercise rationale in fibromyalgia, 99, 101t improvements with aerobic exercise vs nonexercise controls, 102 prescription for, 103-104 strengthening exercise vs controls: mean difference, 100, 103 water exercise, water aerobics, deep water walking, 100, 117 Fibromvalgia accurate diagnosis and symptom assessment, 113-115 analgesic activity, alterations in descending, 57, 58t association with mood, cognitive, and

sleep disturbances, 41-52

Fibromyalgia (continued) central nervous system active medications, rationale for the use of in fibromyalgia, 70t cognitive problems in, 46t comprehensive management plan, 113-128 concurrent illnesses, medically unexplained, 31-40, 32t controversies in the management of, 129-134 co-occurrence with anxiety and mood disorders, 43t definitions, causes, and prevalence of, 9-16, 10t, 11t diagnosis of, 17-30 American College of Rheumatology diagnostic criteria, 19 common descriptions of symptoms by patients, 17-18t diagnostic questions to ask patients, 17 diagnostic work-up, 26 differential diagnosis of, 25-28, 27t fibromvalgia: a constellation of symptoms, 25 fibromyalgia diagnosis improves patient satisfaction, 119 fibromyalgia symptom evaluation, 24 impact on National Health Service resources and expenses (in British pounds) of making a diagnosis of fibromyalgia syndrome, 119, 121, 122-123 laboratory evaluation, 28t positive impact of fibromyalgia diagnosis in clinical practice, 119, 120 routine tests for, 27, 28t Structured Interview, 22, 24t the tender-point examination, 20-21 and disability, 131-132 efficacy of various medications in initial fibromyalgia trials, 84, 92 EULAR recommendations for management of, 126t evidence-based management of, 125t explaining the typical outcome in, 118t functional disorders that often overlap with, 36t genetic predisposition for, 53-57, 56t historical perspective, 11-13 initial description of, 12 initial treatment of, 113, 114, 120, 124 is fibromyalgia a medical or psychiatric illness?, 41, 129, 130t medically unexplained illnesses concurrent with, 32t medication choices and individualizing therapy, 120-127 medicines used in fibromyalgia trials, 71t and mood disorders, 43t mood disorders and fibromyalgia: possible etiologic links, 51t

Fibromyalgia (continued) neuroimaging in, 59, 61t nonpharmacologic management of, 99-112 outcome and disability in, 131, 132t pathophysiologic pathways, 53, 54t patient descriptions of, 18t possible onset triggers, 57 spontaneous remission, 119, 131 subgroups of fibromvalgia patients, identifying may help individualize treatment of, 126, 127t symptoms of, 17-25 when to think of fibromyalgia, 11t who gets fibromyalgia?, 10t who should treat fibromyalgia?, 130-131, 130t Fibromyalgia Impact Questionnaire (FIQ), 24, 71, 78, 79, 85, 94t, 108 Fibromyalgia syndrome, multidisciplinary treatment of, 117, 117t. 123 Fluoxetine, 89, 92, 93 Fluvoxamine, 89

Gabapentin, 69, 72
30% reduction on average pain severity score with gabapentin, 78-79, 82
used in fibromyalgia trials, 71t
Gamma hydroxybutyrate/sodium oxybate (sodium salt of GHB), 94t
Genetics of fibromyalgia, 54, 56, 56t
Glutamate, higher levels associated with increased fibromyalgia pain, 59, 62, 63, 70, 72
Gowers, Sir William, 12
Growth hormone (GH), 95

Headaches, 37, 42 Hypnotherapy, 101t, 106 Hypothalamic-pituitary-adrenal (HPA) axis, 59, 61, 63, 64, 65

Illnesses, medically unexplained, concurrent with fibromyalgia, 31-40, 32t Interstitial cystitis, 37 Irritable bowel syndrome (IBS), 36, 42

Kahlo, Frida, self portrait of, 1916, 13, *14* Ketamine, 93, 94 Magnetic resonance spectroscopy, 53, 55 Manningham, Sir Richard, 11, 33 Maprotiline, 92 Massage therapy, 107, 109 Medications antidepressants used in fibromyalgia trials, 71t anti-inflammatory medications, 92, 94t central nervous system active medications, rationale for the use of in fibromyalgia, 70t chlorimipramine, 92 combination treatment after initial therapy, 121 with fluoxetine and amitriptyline, 89, 93 duloxetine: clinical trials in fibromyalgia, 79, 83t efficacy of various medications in initial fibromyalgia trials, 84,92 fluvoxamine, 89 further medication and nonpharmacologic treatment of fibromyalgia: often with specialists' input, 121, 124 initial medication and nonpharmacologic treatment of fibromyalgia, 120, 124 initial pregabalin in fibromyalgia study design, 70, 73 maprotiline, 92 medication choices and individualizing therapy, 120-127 medicines used in fibromyalgia trials, 71t milnacipran, 79, 83-84, 89, 90 nonbenzodiazepine sedatives, 89, 94t NSAIDs used in fibromyalgia trials, 71t pregabalin and gabapentin, 70, 72 sedatives and hypnotics, 89, 94t SSRIs used in fibromyalgia trials, 71t, 93 tramadol/acetaminophen, 95, 96 tricyclics, 84, 85, 91t venlafaxine: clinical trials in fibromyalgia, 79, 83t Meditation, relaxation, and stress management techniques, 107 Mental problems bipolar disorder, 44 comorbid with fibromyalgia, 44, 44 is fibromyalgia a medical or psychiatric illness?, 129, 130t psychiatric disorders in fibromyalgia patients, nonpatients, and controls, 41, 44 psychiatric disorders in patients with regional and widespread pain, 45t Methocarbamol used in fibromyalgia trials, 71t

Milnacipran, 79 efficacy of milnacipran in initial fibromyalgia randomized clinical trial, 83, 89 mean change in pain with milnacipran, 83-84, 90 Mood disorders associated with fibromyalgia, 41, 42, 43t, 44t, 51t and conditions comorbid with fibromyalgia, 31 evaluation and management of, need for, 114 and fibromyalgia, 43t, 44t lifetime prevalence of, in relatives of 78 probands with fibromyalgia and 40 probands with rheumatoid arthritis, 44t overlap of mood disorders and functional illness of population (%), 41, 42 possible etiologic links between mood disorders and fibromyalgia, 51t Multiple chemical sensitivity (MCS), 32, 36 Muscle muscle relaxants used in fibromyalgia trials, 71t Muscle relaxants used in fibromvalgia trials, 71t Muscles arousal disturbances with disruption of slow-wave (deep) sleep caused muscular pain and fatigue and increased sensitivity to pain. 48-50 no evidence of abnormal muscle metabolism in NMR spectroscopy in fibromyalgia vs controls, 53, 55 Myofascial pain vs fibromyalgia, 37t Neuroendocrine factors, interactions of, on pain, 66 Neuroendocrine studies in fibromyalgia, 59, 64 Neuroendocrine system and stress, 59-65, 66 Neuroimaging in fibromyalgia, 59, 61t Neurostimulation of the brain, transcranial direct current stimulation (tDCS), 101t, 106, 109 N-methyl-D-aspartate (NMDA) receptor, 57 Nonbenzodiazepine sedatives, 89, 94t Nonmedicinal therapy of fibromyalgia: EULAR conclusions regarding, 109t Nonpharmacologic approach to fibromyalgia treatment, 100t Nonpharmacologic management of fibromvalgia, 99-112 Nonpharmacologic strategies: evidence of efficacy, 101t NSAIDs used in fibromyalgia trials, 71t

Opioids, opiates, 95

11

Pain. See also Central nervous system: pain dysregulation. \geq 50% improvement in average pain scores with duloxetine in 3- and 6-month treatment phases, 82, 88 30% reduction on average pain severity score with gabapentin, 78, 82 arousal disturbances with disruption of slow-wave (deep) sleep caused muscular pain, fatigue, and increased sensitivity to pain. 48-50 brain regional blood flow response to pain in fibromyalgia vs controls, 59, 60-61 Brief Pain Inventory (BPI), 78, 79, 82 catechol-O-methyltransferase (COMT) genotype, 54, 56, 56t chronic widespread pain (CWP), 45, 45t, 65 higher glutamate levels associated with increased fibromyalgia pain, 59, 62, 63 improvement in average pain severity with duloxetine, 79, 84 improvement with pregabalin in fibromyalgia, 71, 76 mean change in pain with milnacipran, 84, 90 mean pain scores: pregabalin in fibromyalgia, 75 neuroendocrine factors, interactions of, on pain, 66 N-methyl-D-aspartate (NMDA) receptor, 57 odds of developing chronic widespread pain based on HPA function, 63, 65 pain augmentation: wind-up, 57, 58 pain augmentation disorder, 53, 54t pain diagram from a patient with fibromyalgia, 22, 23 Patient Global Impression of Improvement (PGI-I), 79, 82 regional and widespread, and psychiatric disorders, 45t Short-Form McGill Pain Questionnaire (SF-MPQ), 70 TMJD incidence rates for COMT haplotypes and experimental pain groups, 54, 56 wind up, 57, 58 Parasympathetic activity, 65 Paroxetine, 89, 93 Pathophysiology, 53-68 Patient Global Impression of Change (PGIC), 71, 77, 78 Patient Global Impression of Improvement (PGI-I), 79, 82 Patient subgroups, identification of, 126, 127t Polymyalgia rheumatica (PMR), 25, 26 Pramipexole used in fibromyalgia trials, 71t, 94t Prednisone, 94t Pregabalin, 68-78, 80-81 adverse events in pooled trials with pregabalin, 78, 80-81 Demographic and Baseline Characteristics in First Pregabalin Trial, 74t

Pregabalin (continued) in fibromyalgia: patient global impression of change, 75 and gabapentin, 70, 72 initial pregabalin in fibromyalgia study design, 70, 73 initial prescription for, 120 mean pain scores: pregabalin in fibromyalgia, 75 pain improvement with pregabalin in fibromyalgia, 71, 76 percentage improvement with various doses of pregabalin in fibromvalgia, 71, 76 time to loss of therapeutic response to pregabalin vs placebo, 77 two studies used to establish FDA approval, 70-78 used in fibromyalgia trials, 71t Psychiatric disorders in patients with regional and widespread pain, 45t Oigong, 107

Questionnaire: Short-Form McGill Pain Questionnaire (SF-MPQ), 70 Questions to ask patients, diagnostic, 17

Remission, spontaneous, of fibromyalgia, 119, 131 Rheumatologists as consultants, 130t, 131 Rome I and Rome II criteria, 36

S-adenosylmethionine, 92

Sedatives and hypnotics in fibromyalgia, 71t, 89, 94t Short-Form McGill Pain Ouestionnaire (SF-MPO), 70 Sjögren's syndrome, 10, 22, 25, 26, 27 Sleep arousal disturbances with disruption of slow-wave (deep) sleep caused muscular pain and fatigue and increased sensitivity to pain, 47, 48-50 referral of patient to a sleep laboratory, 114 SNRIs used in fibromyalgia trials, 71t Sodium oxybate used in fibromyalgia trials, 71t Somatization disorder, 45, 45t, 46, 131 Specialists, referral of patients to, 121, 123 SSRIs used in fibromyalgia trials, 71t, 85, 89, 93 Stockman, Ralph, 12 Stress chronic, 51, 51t and the neuroendocrine system, 59-65, 66 Stress management techniques, meditation, and relaxation, 107 Substance P, 70, 72

11

Sympathetic hyperactivity, 65 Symptom evaluation of fibromyalgia symptoms, 22, 24 fibromyalgia: a constellation of symptoms, 21, 22, 25, 25

Tai chi, 107 Task switching and rule complexity, effects of, in fibromyalgia vs healthy controls, 47 TCAs used in fibromyalgia trials, 71t Tender points, 13, 18-25 distinguished from trigger points, 37 the tender-point examination, 19, 20-21 Tizanidine used in fibromyalgia trials, 71t TMJ syndrome, also called TMD or TMJD, 22, 36t, 38 TMJD incidence rates for COMT haplotypes and experimental pain groups, 54, 56 Tramadol, 71t, 93, 94, 121 Tramadol/acetaminophen in fibromyalgia, 94-95, 96 Trauma: relationship of trauma onset of fibromyalgia with disability application, 115 Trazodone used in fibromyalgia trials, 71t Treatment effective management in lieu of a cure, 133 individualized according to patient subgroups, 126, 127t recommendations based on evidence from clinical trials. 125, 125t who should treat fibromyalgia?, 130-131, 130t Tricyclic antidepressants, 84-85, 91t Trigger points, distinguished from tender points, 37 Tropisetron, 94t

Ultrasound therapy, 107

Venlafaxine: clinical trials in fibromyalgia, 79, 83t Visual Analog Scale (VAS), 70

Water exercise, water aerobics, deep water walking, 100, 117 Web sites with fibromyalgia information, 118 Wind up, 57, 58

Yoga, 107

Zolpidem, 71t, 89, 94t Zopiclone, 71t, 89, 94t