Index

A

Abela, J. R., 158
Absorption, 18–19, 30, 125, 127–128
ADHD, 17, 196–199
  body awareness, 198–203
Addiction and impulse problems, 179–194
  asanas for, 191–193
  breathing for, 190
  definitions of, 180
  dopamine and serotonin levels in, 182
  five-step method, 182–194
    action, 190–193
    contemplation, 186–187
    maintenance, 193–194
    precontemplation, 185–186
    preparation, 187–189
  neurobiology of, 181–182
  meditation for, 188, 189, 194
  tolerance, 181, 182, 186
  withdrawal, 14, 179, 180, 182, 183, 185, 187, 191
Aggression, 16, 158, 254
  in children, 196, 207–210
Aging, 217–239
  brain changes in, 218–219
  chair sitting asanas for,
    224–231
    arm reach, 224
    arm swing, 224
    sun salutation, 225
    triangle, 225
    wrists, ankles, knees, and hip joint rotations, 229–231
  cognitive changes in, 219
disorders of, 220–222
dementias, 221–222
  mild cognitive impairment, 220–221
  prolonged stress, 220
  enhancing vitality, flexibility, and strength, 223–232
  finding value in, 222–223
  meditation for, 224
  memory enhancement,
    231–236
  flexible attention, 234–235
  focusing attention
    unconsciously, 233–234
  mantra and mudra exercise, 235–236
Aging (continued)

mindful attention, 233
pratyahara to narrow the field, 232–233
working with attention, 232
pain control, 236–239
acceptance, 239
altering pain exercise, 238
distraction from pain, 230–240
renewal, 239
Alertness, 20, 27, 91, 92, 96, 99, 129, 134, 232, 258
Alexander, C. N., 7, 10, 14
Allard, T. T., 35
Allostasis, 117
Allport, G. W., 211
American Psychiatric Association, 180
American Psychological Association, 115, 180
Anger, 5, 11, 12, 20, 119, 177, 183, 259
Anxiety, 133–155
asanas for
backward and forward bend, 141–143
cat’s breath, 146–147
child’s pose, 147
twisting triangle, 145
autonomic nervous system
involvement, 133
balancing through nostril
breathing, 138–139
balancing through posture, 139
calming the mind-brain system, 136–137
generalized anxiety disorder (GAD), 134
grounding, 137
meditation, for
centering, 149
with a mantra, 152–153
on posture and breathing, 148
relaxing, 148
neurotransmitters, 134
obsessive-compulsive disorder (OCD), 136
cleansing breath meditations, 154–155
treating in children, 203–207
panic disorder, 136, 149–151
contemplation, 150–151
deconstructing anxiety, 149–150
focus on sensations, 150
focus on thoughts, 150
posttraumatic stress disorder (PTSD), 136
role of the hippocampus, 152
psychological theories of anxiety, 134–136
role of limbic system, 134
social anxiety disorder (SAD), 135
specific phobias, 136
types of anxiety, 135–136
visualizing the Muladhara chakra, 137–138
Archer pose, 125–127
Arjuna, 47–48, 124–125, 174–175
Asanas, 81, 89–100
archer pose, 125–127
asana series for anxiety, 141–147
camel pose, 201–202
cat’s breath, 146–147, 204–205
chair-sitting yoga, 223–232
child pose, 147, 209–210
cobra pose, 167–168
crocodile pose, 98, 99, 130, 167, 209
downward dog pose, 167–168, 200–201
lion pose, 199, 202–203
lying prone, 91, 97–100
sasvasa pose, 91, 98–99, 111, 124, 130, 148, 169, 194, 209
sitting, 91, 92–95
sun salutation (modified), 162–169, 227
standing, 91, 95–97
triangle pose, 144, 227
twisting triangle pose, 145
tree pose, 199–200,
twisting triangle pose, 145
warrior pose sequence, 191–193

Attention
alternating attention, 234
attention monitoring, 31
conflict monitoring, 31
conscious and unconscious attention with seniors, 232–234
conscious attention, 30
unconscious attention, 30, 31–32, 233–234
flexible attention, 18, 234
focused attention, 30–31, 125–129, 208, 209
lacking tools for attending, ix
meta-attention, xii, 233,
open attention, 31–32
Aurobindo, Sri, 49, 62–63, 87, 245

B
Balance, 138–139
Basal ganglia, 28, 29, 40, 134, 221–222, 261–263
Bears, M. F., 40
Beckett, L. R., 12
Begley, S., 34
Benson, H., 14
Bentler, S. E., 12–13
Bhagavad Gita, 47–48, 78, 115, 119, 125, 174–175
part of Mahabharata, 47
Bhakti yoga, 50, 51
Bhatia, M., 20
Bikram yoga, 64
Bonura, K. B., 20
Bottom-up processing, 260–261
Brain pathways, 266–267
Brain stem, 27–28, 236, 260–261
Brazier, A., 8
Breathing, ix, xii, 4, 5, 6, 25, 26, 27, 28, 30, 52, 81, 82, 83, 88, 92, 100–104, 107, 110, 120, 122, 169, 204, 207, 211
See also pranayama
with asanas 4, 190–191
for children, 207
cleansing breath, 154–155
complete breath, 102–104
dharana on breathing, 107–108
focus on breathing: counting the breaths, 102
kumbhaka, 100
listening to breathing, 102–103
nostril breathing, 138–139
for pain control, 239
puruaka, 100
raising the Kundalini, 170
rechaka, 100
relaxed breathing, 130, 136
shunaka, 100
strengthening the breath, 190
for vitalizing, 169–170
Breuer, J., 27
Briones, T. L., 34
Brooks, C., 29
Brown, R. P., 18, 28
Brunton, P., 246
Buddhism, 45–46, 52, 60, 78, 80, 247, 251

C
Calbeza, R., 39
Calming, 136–137, 194
Camel pose, 201–202
Case examples
Barbara, 160–162
Diane, 244–245
Ed, 183–184
James, 151–152
Jerry, 197–198
John, 122
John and Mary, 177
Larry, 222–223
Marta, 120–121
Nathan, 3–4
Rene, 182–183
Tank, 4–5
Centering, 149
Cerebellum, 28–29, 40, 260–261
Chakras, 53–58
Ajna chakra, 53, 56, 57
Anahata chakra, 53, 56, 127–129
Manipura chakra, 53, 54, 55
Muladhara chakra, 53, 54, 137–138
Sahasrara chakra, 48, 53, 56
Svadhisthana chakra, 53, 54, 55
Vishuddha chakra, 53, 56, 57
Children, 195–216
ADHD treatments, 196–203
aggressive behavior, 207
anxiety and stress, 203–206
asanas for children
camel pose, 201–202
cat’s breath, 204–205
child’s pose, 209–210
downward dog pose, 200–201
lion pose, 202–203
tree pose, 200
creative learning, 215–216
learning and memory, 211–216
meditations for
clearing away illusions, 215
dhyana open meditation, 208–209
family meditation, 211–212
focus on breathing, 207
focus on a color, 208
focus on feelings, 209
meditation contest, 211
meditation with distractions, 211
meditative listening, 213
reading comprehension, 214
Chinmoy, Kumar Ghose, 69–70
Choudhury, B., 64
Churchland, P. M., 24
Cognitive behavioral therapy CBT, 11, 140, 151–152, 158
Concentration
dharana, 107
dharana focus on thoughts, 150
dharana on breathing, 107–108
dharana on a mantra, 108–109
dharana on an object, 107
Contemplation
with a concept, 110
dhyana meditation, 109–110, 150
Crocodile pose, 130
Curiati, J. A., 16
Index 289

D

Daoism, 80
Das, N., 20
Davidson, R., 18, 30, 31
Dementias, 221–222
Depression, 157–178
  actions for their own sake, 174–175
  actions from their fruits, 175–176
  altering the neurochemical balance, 162–169
  asanas for
    modified sun salutation, 162–169
  breathing for
    raising the Kundalini, 170
    vitalizing, 169–170
  cognitive change, 170–174
  cognitive theory, 158
  integrative theory, 159–160
  interpersonal aspects of, 176–178
  learned helplessness, 159, 171–172
  love and compassion, 179
  neurochemical theory, 158
  relationships, 176–178
  meditation on, 178
  resistance, 172–174
  selfless love, 176
  small change, 172
  sociological theories, 159
Desikachar, T. K. V., 91
Devi, I., 66–67
Dillbeck, M. C., 9, 10, 20

Dohrenwend, B. P., and Dohrenwend, B. S., 118
Dual action of relaxation and activation, 20–21

E

Efficacy
  addiction, 13–14
  aging, 14–16
  anxiety, 11–13
  children, 16–17
  depression, 13
  stress, 10–11
Eight limbs of yoga, 75–83
  See also Yoga Sutras
  for addiction, 179–180
  asanas, 81, 87–100
  dharana, 83, 107, 107–109, 124–129, 188, 208
  niyamas, 76–80, 87–89, 121–123
  pranayama, 82, 100–104
  pratyahara, 82–83, 106–107, 123–124, 150, 187–188
  yamas, 76–80, 87–89, 121–123
  emotionally focused therapy (EFT), 159
  executive control, 25–26, 195–197, 203–204, 208

F

Feuerstein, G., 157, 250
First World Parliament of Religions, 58
Fodor, J., 24
Frank, J. D., 247,
Freedom, 241–251
Frontal lobe, 25, 31, 222, 263–264

G

Gage, F. H., 33, 34
Galamtino, M. L., 17
Gandhi, 194
Gauthier, L. V., 36
Gelderloos, P., 7, 14
Goleman, D., 18
Ghosh, Bishnu, 64
Ghosh, K. C., 69–70
See also Chinmoy
Granath, J., 11
Greenough, W. T., 34
Grounding, 137

H

Hagelin, J. S., 9
Hardiness, 119
Hatha yoga, 49, 50, 65, 76, 91, 162
Hatha Yoga Pradipika, 49, 76
Health
and faith, 247
improved cardiovascular function, 8, 101
overall psychological health, 7, 14, 17, 20, 77, 118, 154, 247
positive effects, 7, 46
physical health, 50, 79, 121, 154
self-actualization, 7
in seniors, 19–20
well-being, 7, 8, 82, 254
Hebb, D. 258
Hempel, H., 10
Hering, E., 27
Hinduism, 45–46, 52, 60, 73
Hippocrates, 116
Hippocampus, 33–34, 36, 39, 41, 134, 152, 219, 221, 231–232, 262
HPA pathway, 117-118, 121, 237, 239, 266–267

I

Ida, 52, 53
Impulse control disorders, 180
See also addiction
Ingvarsson, S., 11
Intelligence
ajna chakra, 56
improved cognitive processing, 8
Intuition, x, 56, 249, 250
Ishvara, 74
Iyengar, K. S., viii, 12, 14, 49, 50, 66

J

Janis, I., 118
Jenkins, W. M., 35
Jerath, R., 27
Jnana yoga, 50, 60
Jobis, P., 66
Johnson, S., 159
Jung, C., 242
Index

K

Karma yoga, 50, 51, 60, 63, 174, 175, 243
Khumar, S. S., 13
Kirtan Kriya yoga, 16
Kobasa, S., 119
Koob, G. F., 180
Krishna, 47–48, 174–175
Krishnaramacharaya, T., 50
Kriya yoga, 64
Kuhn, H. G., 34
Kumar, V. K., 11
Kundalini yoga, 11, 50, 52–58, 104, 170

L

Lazar, S., 14, 218, 219
Lazarus, R. S., 118, 119,
Learning
  brain areas in habit learning, 40
  conditioning, 37
  conscious learning, 38–41
  creative learning, 215–216
  emotional learning, 40
  learning for children, 211–216
  listening in class, 213–214
  at the neuronal level (LTP), 37, 234, 258
  priming, 39, 234
  reading comprehension, 214
  unconscious learning, 39–41
Liberation, 157, 241–251
Limbic system, 18, 25, 27, 39, 133–134, 158, 207, 261–263
Love, 18, 51, 56, 60, 67, 160, 176, 177, 178, 179, 183, 251
LTP (long term potentiation), 27, 37, 234, 258
Lunberg, U., 11
Lutz, A., 30, 31, 32

M

Mahabharata, 47–48
Maharishi effect, 9–10
Maharishi Mahesh Yogi, 9–10, 51, 70–71
Mahavakyas, the great sayings of the Upanishads, 47
Manjunah, N. K., 16
Mandalas, 52
Mantras
  about, 29–30
  dharana on a mantra, 108
  mantra meditation, 152–153
  for memory enhancement, 235–236
Mantra yoga, 50, 51, 70
Martin, K. C., 32–33
McCloskey, G., viii, 25, 195
Medina, J. F., 37
Meditation
  for addiction, 194
  allowing meditation, 111
  for anxiety, 148
  clearing meditation, 251
  from contemplation to meditation, 110–111
  cultivating meditation for stress, 122
  family meditation, 211
  improved memory, 8, 36
  meditation contest, 211
  meditation with distractions, 211
Meditation (continued)
on posture and breathing, 148
on something else, 189
for relationships, 178
samayama, meditative last three limbs, 69, 70
Memory, 36–41, 134, 172
conscious memory, 38–39
declarative memory, 38–40
memory with children, 211–216
memory enhancement with aging, 231–236
nondeclarative memory, 40
Michalsen, A., 12
Mild cognitive impairment, 220–221
Miller, B. S., 50, 133
Mind and brain
balance under stress, 182
change, ix–x
relationship, 23–24, 37, 159, 178
Mitchell, D. B., 39, 234
Molafson, H. M., 40
Mudras, 6, 235–236

Neuroscience research
body postures, 28–29
breathing, 26–28
executive control, 25
memory and learning, 31–36
polyvagal theory, 27
remapping the brain, 33–36
Neurotransmitters, 117, 134, 157, 158, 181, 186, 221, 247, 256–258, 266
Newberg, A. B., 16, 28, 235
Niranjananananda Saraswati, S., 14
Niyamas, 76–80, 87–89
for addiction, 185–186
ishvara pranidhana, 80
pranitara, 79–80, 185
shaucha, 78–79, 154
santosha, 78, 79, 185,
for stress, 121–123
tapas, 78, 79, 185, 249
Non-specific factors of healing, 247–248

Obsessive compulsive disorder (OCD), 136, 154–155
Occipital lobes, 18, 28, 29, 30, 263, 265
Open focus meditation, 31–32, 129,
One-pointed awareness, 129
Orme-Johnson, D. W., 9, 10, 21
Ott, U., 10, 18
Ouchi, Y., 29

Pain control, 236–239
neurobiology of pain, 235–238
psychology of pain, 236–238
Panic disorder, 136, 149–151
Pandey, R. M., 11
Paramahansa Yogananda, 64
Parietal lobes, 29, 30, 34, 40, 263, 265
Patanjali, 48–49, 75–83, 89, 133, 179
Pilkington, K., 13
Place, U. T., 24
Plato, 60, 83–85
Pingala, 52, 53
Pons, T. P., 35
Porges, S. W., 27
Positive psychology, x–xi, 89, 248
Posttraumatic stress reduction, PTSD, 151–153
Prakriti, 74–75
Prana, 52, 82, 100, 105, 190, 191
Pranayama, 27, 28, 30, 52, 82, 83, 88, 92, 100–104, 107, 110, 120, 122, 169, 204, 207, 211
See also breathing
Prasad, K. V. V., 8
P300, 8
Purusha, 74–75

Relaxation, 7, 6, 12, 13, 20, 28, 90, 81, 97, 99, 121, 123, 124, 129–131, 137, 140, 141, 181, 184, 196, 200, 204, 239,
Research on yoga

efficacy for treatment of
addiction and substance abuse, 13–14
ADHD, 17
aging, 14–16
anxiety, 11–13
children, 16–17
chronic fatigue syndrome, 12–13
compared to CBT, 11
depression, 13
OCD, 12
PTSD, 12
stress, 10–11, 12
factors of healing
absorption, 18–19
dual-action of relaxation and activation, 20–21
self-regulation, 19–20
spirituality, 17–18
general effects:
for caregivers of elderly, 11
for HIV/AIDS, 8
health benefits, 7
improved cardiovascular functioning, 8
self-actualization, 7
improved attention, 11,
improved memory, 7, 8, 9
neuroscience, 23–41
See also neuroscience research
social change, 9–10
See also Maharishi effect
Resistance, 124, 172–174
Restak, R. M., 30
S

Samkhya, 73, 74, 76
Samyama, 69, 83
Sarang, S. P., 8
Satchidananda, 67–68
Savasana pose, 91, 98–99, 111, 124, 130, 148, 169, 194, 209
Schneider, A. M., 20
Schoville, W. B., 40
Schools of Hinduism
Mimamsa, 73
Nyaya, 73
Samkhya, 73–74
Vaisheshika, 73
Vedanta, 48, 73
Yoga, 73
Self-Realization Fellowship, 64
Self-regulation, 19–20
Seligman, M. E. P., 159
Seyle, H., 118
Shaffer, H. J., 13
Shannahoff-Khalsa, D., 12, 16, 52, 235
Shapiro, D., 13
Simpkins, A. M., 24, 87, 162, 187, 191, 246
Simpkins, C. A., 24, 87, 162, 187, 191, 246, 251
Sivananda, S., 67–68
Slagter, A., 32
Sleep, 15
Slueck, M., 17
Squire, L., 39, 181, 182, 234
Steffensen, E. H., 27
Sthira, 97
See also alertness
Stress
aging from prolonged stress, 220
asanas for
archer pose, 125–126
crocodile pose, 130–131
savasana pose, 130–131
background and theory, 115–116
and coping, 118–119
defined, 116–117
and expectancy, 118–119
HPA pathway, 117–118
meditations for
absorption in an inner image, 128
focus on a chakra, 127–128
one-pointed awareness, 129
open meditation, 129
visualizing beyond thought, 131
narrowing the focus, 124–125
neurobiology of stress, 117–118, 121
personality factors, 119
pratyahara to lessen, 124–125
relaxation
prone postures, 130–131
relaxed breathing, 130
resistance, 124
treating in children, 203–207
using yamas and niyamas for treatment, 121–123
yoga interpretation of, 119
Socrates, 83–85
Soul
centering, 243
of the client, 244–248
definition of, 241–242
Index

source of Samadhi, 242
of the therapist, 248–250
Spirituality, 16, 17–18, 58, 69, 78, 80, 87, 241–251
neurobiology of, 18
Subramanya, P., 12
substance abuse, 179–184
See also addiction
Sukha, 97
See also relaxation
Sulekha, S., 15
Sung, B. H., 19
Sushumna, 52–53, 104

T

Tantra, 51–52
Tantra yoga, 51–52
Telles, S., 8, 12
Temporal lobes, 18, 29, 39, 40, 222, 263, 265
Thompson, W., 11
Tibetan Buddhism, 46, 52
Top-down processing, 260–261
Transcendental meditation (TM), 6, 7, 9, 14, 51, 70
Triangle pose, 144
Twisting triangle pose, 145

U

Upanishads, 47, 74, 243

V

Vagus nerve, 27
Vaitl, D., 10, 18
Values, 48, 51, 76, 80, 89, 123, 135, 183, 184, 185, 186, 239, 244, 248–249
Vedanta, 48, 73
Vedas, 46–47
Ajur, 46–47
Atharva, 46–47
Rig, 46–47
Sama, 46–47
Visualizing, 131, 137–138
Vivekananda, 3, 45, 58–69, 89, 100, 171, 242
Von Thiele, U., 11

W

Wacholtz, A. B., 18
Wallace, C. S., 15, 34
Warm-up exercises, 253–255
bent elbow twist, 254
chest stretch, 255
forward bend, 254
head roll, 254
leg swing, 255
lower back stretch, 255
shoulder roll, 254
side stretch, 255
upward stretch, 254
Whitehorn, J. C., 118
Williams, A. L., 12, 40, 152–153

Y

Yamas, 76–80, 87–89
for addiction, 185–186
ahimsa, 77, 185
aparigraha 78, 185
asteya, 77–78, 185
Yamas (continued)
  bramacharya, 77–78
  for stress, 121–123
  satya, 77–78, 185
Yantra, 52
Yoga
  and the brain, 23–41
  philosophy, 45, 83–86
  practical system, 45
  practices, 87–111
  popularity, xi
  traditions, 45–71
Yoga Journal, xi
Yogacara, 46
Yoga Sutras, 48–49, 75–83, 109

Z

Zen Buddhism, 251, 257