INDEX

(Page numbers in *italics* refer to figures/tables.)

A
Aarskog syndrome, differential diagnosis with fetal alcohol syndrome, 91
Abstinence, *see under* Alcohol
Abortion, spontaneous, *see* Spontaneous abortion
Abuse, *see* Child abuse
Academic performance, and prenatal alcohol exposure, 120–121
Adoption, 18, 208, 209, 212, 213
Advice to pregnant women, 17, 19
  bottle labelling, 19, 220, 220–221, 229
preconceptional
  in epilepsy, 45
  in high-risk women, 257
Advocacy, 224–229
  for children with fetal alcohol spectrum disorders, 245–247
Affective disorders
  coexisting with fetal alcohol syndrome, 89
Aggressive behaviour
  and prenatal cocaine exposure, 132
  and prenatal MDMA/methamphetamine exposure, 177
  and prenatal methadone exposure, 146
  and prenatal nicotine exposure, 191
  susceptibility gene, 192
  *see also* Domestic violence, Violence
Alcohol
  abstinence, in pregnancy, recommended, 220–221, 222
  abuse, 8
  and child abuse/neglect, 223
intergenerational, 223–224
maternal
  intervention strategies, 217–230
  alcohol counsellors, 218
  risk factor for fetal alcohol syndrome, 98
  treatment programmes, 222
  postnatal interventions, 223–224
prevention, 19
spontaneous abortion, 16
teams, 100
advice, 19
binge drinking, 13
  before pregnancy recognition, 222
  definition, 14
history of, for diagnosis of fetal alcohol syndrome, 109
intervention, 224
  and MDMA use, 171
  prenatal exposure
    behavioural problems, 122
    birth defects, 16
    learning/memory impairment, 119
    psychopathology, 122–123
    reduced IQ, 116
bottle labelling, 19, 220, 220–221, 229
consumption, estimation, 11
  by self-report, 11, 99
effect on brain development, 32–40, 33
  in mice, 34
exposure, in utero
  academic performance, 120–121
  attention deficits, 237
  behavioural deficits, *117, 121–123
  biomarkers for, 101–103
  cognitive impairment, 116–121, *117, 235–239
  executive functioning deficits, *110, 117, 235–237
  foster placement, 123
  functional changes, 115–116
  language skills, 118
  learning and memory skills, 118–119
  motor skills, 119
  neurodevelopmental outcome, 17–18
  prevalence rates, 262
  psychopathology, 122–123
  quality of life, 123
  structural changes, 110–115
  visuospatial skills, 118
heavy drinking
  definition, 13
  outcome, 16, 17
    low birthweight, 93–94
    preterm birth, 93, 96
low-to-moderate drinking
  definition, 13
  neurodevelopmental outcome, 17
maternal consumption
  areas of brain damaged in utero by, *110
  history, 97
Parent–Child Assistance Program (PCAP), 219
postnatal interventions, 223–224
screening tools, 99–100
moderate drinking
  definition, 13
spontaneous abortion, 17
problem drinkers, in pregnancy, identifying, 99–100, 274

280
standard drink, 12, 13, 99
sudden infant death, 99
treatment programmes, 222
use in pregnancy
  interventions to reduce, 100–101, 217–230
  prevalence, 271
social management, 276
violence and, 223, 224
  risk of poor outcomes in children, 211
warning messages, 19, 217–218, 220, 220–221, 229
see also Fetal alcohol effects, Fetal alcohol spectrum disorder, Fetal alcohol syndrome
Alcohol-related neurodevelopmental disorder, 105
Alert Program, 242
Amisulpride, 72
Amitriptyline, 62
Amphetamines, 9, 17
  neurochemical effects, 169–170
  neurocognitive effects, 177
  neuropsychiatric effects, 173
  use prevalence
    in pregnant women, 15–16
    trends in, 15
see also Methamphetamine
Analgesics, 271
Anencephaly, 37
  and valproic acid, 37
Animal studies, 18, 272
  in brain development, 23–40
  prenatal amphetamine exposure, 174
  prenatal cannabis exposure, 157, 161
  prenatal cocaine exposure, 135
  prenatal MDMA/methamphetamine exposure, 175–176
  prenatal nicotine exposure, 189–190
  prenatal opiate exposure, 142
Anticonvulsants, see Antiepileptic drugs
Antidepressants, 265
  adverse neurocognitive outcome, 68
  see also under Depression
Antiepileptic drugs (AEDs), 7, 44–54
  cardiac defects, 46
  cleft lip/palate, 46, 47
  developmental delay, 48
  facial dysmorphism, 47
  fetal anticonvulsant syndrome, 45
  fetal hydantoin syndrome, 7, 45–47
  genito-urinary abnormalities, 46
  malformations, 46
    major, 45–47
    minor, 47–48
  neural tube defects, 46, 47
  ocular defects, 46
  polytherapy, 45, 46, 47
  spina bifida, 47
  teratogenic effects, 45–53
see also specific drugs
Antihistamines, 263, 271
Antipsychotics, 71–77, 264–265
  see also under Psychosis, and individual drugs
Anxiety
  associated with depression, 57
  in autism spectrum disorder, 255, 265
  in children of mothers with postnatal depression, 58
  in cocaine-using women, 133
  during pregnancy, 57
  in MDMA-using individuals, 172
  and prenatal alcohol exposure, 117, 122
  and prenatal methadone exposure, 146
  and prenatal nicotine exposure, 191
  and prenatal SSRI exposure, 67, 69
Anxiolytics, 265
Aripiprazole, 72, 76
Asthma
  drug therapy for, during pregnancy, 271
  following prenatal nicotine exposure, 185
Atomoxetine, 262
Attachment disorder
  and autism, 261
  and fetal alcohol syndrome, 6
Attention-deficit–hyperactivity disorder (ADHD)
  DSM-IV criteria, 254
  and fetal alcohol spectrum disorder, 253–255
  and fetal alcohol syndrome, 267
  in fetal teratogen syndromes, 252, 257, 260, 268
  and prenatal alcohol exposure, 117–118
  and prenatal methadone exposure, 146
  and prenatal opiate exposure, 142, 143
  support groups, 267
Autism/autism spectrum disorder (ASD)
  attachment behaviour, insecure, 261
  coexisting with fetal alcohol syndrome, 89
  in fetal teratogen syndromes, 252, 255–256, 257, 258
  sodium valproate, 49, 51–52
  support groups, 267
B
Baby Peter, 199, 203
Barbiturates, 16
Basal ganglia, see under Brain
Behavioural teratology, 1, 7
Behaviour disorders
  and prenatal alcohol exposure, 17, 121–123
  and prenatal cocaine exposure, 132, 138–139
  and prenatal methadone exposure, 146
  and prenatal nicotine exposure, 186, 188–193
  and prenatal opiate exposure, 142, 143
Behavioural interventions, 234–248, 244
Behavioural support, 244–245
Benzodiazepine, 16
Binge drinking, see under Alcohol
Birthweight, low, see Low birthweight
Bottle labelling, 19, 220, 220–221, 229
Brachman–de Lange syndrome, see Cornelia de Lange syndrome
Brain
abnormalities in fetal alcohol syndrome, 109–116
and valproic acid, 37
areas damaged in utero by maternal alcohol consumption, 110, 111
basal ganglia, 110
changes following prenatal alcohol exposure, 111, 114
metabolic changes following prenatal methamphetamine exposure, 177
reduced volume
in fetal alcohol syndrome, 95
following prenatal alcohol exposure, 114
cerebellum, 110
cannabinoid receptors, 163
changes
in fetal alcohol syndrome, 95
following prenatal alcohol exposure, 111, 113
and executive function, 158
cerebrum, 110
changes following prenatal alcohol exposure, 111, 112
changes with prenatal alcohol exposure, 111
corpus callosum, 110
agenesis in fetal alcohol syndrome, 36, 95
changes following prenatal alcohol exposure, 113, 114
hypoplasia in fetal alcohol syndrome, 95
cortex, 110
diencephalon, 110
exencephaly, 37
fetal/embryonic development
alcohol-affected, 32–40, 33
in humans, 23–32, 25, 26, 27, 28, 29, 31
in mice, 30, 31, 32, 34, 35
functional changes, and prenatal alcohol exposure, 115
grey matter
changes in fetal alcohol syndrome, 95
magnetic resonance imaging, 112–113
globus pallidus, changes following prenatal methamphetamine exposure, 177
hippocampus, 110
cannabinoid receptors, 163
changes following prenatal alcohol exposure, 111, 114–115
changes following prenatal cannabis exposure, 161
changes following prenatal methamphetamine exposure, 177
and executive function, 158
holoprosencephaly, see Holoprosencephaly
hypothalamus, 110
imaging
in fetal alcohol syndrome, 94, 97
in prenatally alcohol-exposed individuals, 111, 275
in prenatally buprenorphine-exposed individuals, 146
in prenatally methamphetamine-exposed children, 177
see also Magnetic resonance imaging
microcephaly, see Microcephaly
neocortex, 110
neural tube, see Neural tube
parietal lobe, 110–112
prefrontal cortex, 163
putamen, changes following prenatal methamphetamine exposure, 177
thalamus, 110
ultrasound examination, in alcohol-exposed neonate, 97
white matter
hypoplasia, in fetal alcohol syndrome, 95
integrity, following prenatal alcohol exposure, 112
regions affected in cocaine-exposed children, 137
see also Central nervous system
Breastfeeding
and neonatal abstinence syndrome, 202
and postnatal depression, 274
Buprenorphine, 140, 144, 146–147
prenatal exposure
neuroimaging studies, 146
see also Maintenance therapy
Bupropion, 59
Butyrophenones, 72
C
Cancers, in children of mothers who smoked during pregnancy, 186
Cannabis, 8–9, 14, 17, 153–165
longitudinal studies, 153–164
strength, 165
use in pregnancy
birthweight, 156
cocaine, coexposure, 157
course of pregnancy, 155–156
effects in infants and children, 154
delinquency, 162
executive function, 158–159, 161, 163–164
externalizing behaviour, 162
neonatal effects, 156
neurocognitive outcomes
in adolescents and young adults, 162–164
in late infancy and preschool children, 157–159
in young school-aged children, 159–162
preterm birth, 155
short-term memory impairment, 157
precipitate birth, 155
prevalence, 15–16, 153, 271
sex differences, 15
trends in, 15
variation by maternal age, 15, 165
variation by trimester, 15
Carbamazepine, 7, 46, 52
cardiac defects, 47, 52
cleft palate, 52
facial dysmorphism, 47
in fetal teratogen syndrome, 266
folic acid deficiency, 53
long-term outcome, 74
neural tube defects, 52
spina bifida, 47
Cardiac defects
antiepileptic drugs, 46, 47
carbamazepine, 52
in fetal alcohol syndrome, 95
valproic acid, 50–51
Central nervous system (CNS) anomalies, in fetal alcohol syndrome, 88–89
development, see under Brain
Cerebellum, see under Brain
Cerebrum, see under Brain
Child abuse/neglect, 8, 139
and alcohol abuse, 223, 224
by substance-abusing parent, 200, 203, 209, 213
Child and Adolescent Mental Health Services (CAMHS), 256–257
intellectual disability team, 267
Child Development Clinics, 258
Child protection
alcohol-dependent mother, 104–105
child care, statutory, 208–210, 213
interagency working, 209–210
thresholds in, 208, 208–209
conference, 5, 7, 203, 209, 210
investigation, 101
plan, 209, 274
substance-abusing mother, 200
see also Adoption, Foster care
Chlorpromazine, 73, 263
long-term outcome, 74–75
Chlorprothixene, 75
Chromosomal analysis, in fetal alcohol syndrome, 97
Cigarette smoking, see Smoking
Citalopram, 59
neurodevelopment, long-term, 61, 69
Cleft lip/palate
alcohol-exposed mouse fetus, 36
amphetamine-exposed infant, 174
fetal alcohol syndrome, 96
fetal hydantoin syndrome, 49
fetal valproate syndrome, 51, 252
and prenatal antiepileptic drug exposure, 45, 46, 47
and prenatal carbamazepine exposure, 52
and prenatal tobacco exposure, 184
Climbié, Victoria, 199, 203
Clomipramine, 60
Clonazepam, 62, 67
Clozapine, 72, 76
Club culture, 14
Cocaine, 8, 14, 17, 130–140
characterization as benign substance, 130
child abuse/neglect, maternal history of, 139
crack, 8, 130, 133, 200
crack babies, 17, 130–131
mechanisms of action, 131–132
screening for, 131
use in pregnancy
animal studies, 135
cannabis, coexposure, 157
effects on infants and children, 132
academic achievement, 138
attention deficits, 138
behavioural outcomes, 133–134, 138–139
cognitive development, 135–138
environmental factors, 139–140
fetal alcohol syndrome, coexisting, 139
health outcomes, 134–135
language skills, 135
white matter, affected regions, 137
maternal–child interaction, 134
psychopathological features, 133
use prevalence, 15–16
sex differences, 15
trends in, 15
Codeine, 140
Cognitive impairments
in fetal alcohol spectrum disorder, 235–239
in fetal alcohol syndrome, 116–121
and MDMA use, 173
and prenatal alcohol exposure, 17, 116–121, 117
and prenatal cannabis exposure, 157–164
and prenatal cocaine exposure, 135–138
and prenatal nicotine exposure, 186–188
and prenatal opiate exposure, 142, 143–144
and prenatal valproate exposure, 49
Congenital heart defect, see Cardiac defects
Consumption, see Exposure
Concerta XL, 262
Cornelia de Lange syndrome, 48
in differential diagnosis of fetal alcohol syndrome, 90, 91
Corpus callosum, 110
agenesis, in fetal alcohol syndrome, 36, 95
changes with prenatal alcohol exposure, 111, 114
hypoplasia, in fetal alcohol syndrome, 95, 103
reduced volume in prenatally cocaine-exposed
infant, 132, 137
Cortex, 110
Counsellors
alcohol, 218
drugs, 202
Crack cocaine, see under Cocaine
Crack babies, 17, 130–131
Criminal activity
and dependent drug use, 16
of children of mothers who smoked during preg-
nancy, 189
of substance-dependent adults, 203
Crystal meth, see Methamphetamine

D
DAISY study, see Drugs and Infancy Study
Dance club culture, 14
Decongestants, 271
de Lange syndrome, see Cornelia de Lange syn-
drome
delinquency, in children of mothers who smoked
during pregnancy, 189
Depression, 2, 7, 56
in cocaine-using women, 133–134
management during pregnancy, 274
and MDMA use, 173
in methamphetamine-using mothers, 178
pharmacotherapy
during pregnancy, 58–70, 271
adverse neurocognitive outcome, 68
pre-conception, 274
untreated, 57–58
Dexamphetamine, in ADHD, 264
Desipramine, 62
Developmental delay
antiepileptic drugs, 48
Diabetes
drug treatment, during pregnancy, 271
recommendations for, 272
type II, in children of mothers who smoked during
pregnancy, 186
Diazepam, 265
Diencephalon, see under Brain
Domestic violence/abuse, 2, 5, 16, 274
and fetal alcohol syndrome, 224–225
and substance misuse, 203
Dopamine, 72
and MDMA methamphetamine, 170, 176
Doxepine, 62
Drinking, see Alcohol, Alcohol abuse, Binge drinking
Drug czar, 130
Drugs
dependent use, 16
experimental use, 14
illicit, use of
counselling, 202
national strategy, legal vs harm reduction, 201–
202
outcomes, 17–18
prevalence in pregnant women, 15
labelling, 272–273
misuse, parental
and child abuse, neglect, 203–207
external family support, 212
family breakdown, 212–213
interventions/treatment, 209, 211
risk management, 204–208
risk/resilience factors, 206
recreational use, 14–16
soft, 14
use in pregnancy, 271
child-care proceedings, 200
management, 199–201, 277
social, 276
mortality, 199
over-the-counter medicines, 271
rate, 271
treatment, 199
see also individual drugs
Drugs and Infancy Study (DAISY), 172, 175–176,
177, 178–179
DSM-IV, 258
criteria for attention-deficit–hyperactivity dis-
order, 254
Dubowitz syndrome, differential diagnosis with
fetal alcohol syndrome, 91
Dyslexia/dyspraxia, 252

E
Echocardiography, in alcohol-exposed neonate, 96,
97
Ecstasy, see MDMA
Embryonic development, see Human development,
and under Brain
Epilepsy, 1, 44–54
management before and during pregnancy, 273
preconceptional advice, 45
see also Antiepileptic drugs
Equasym XL, 264
Examination
of alcohol-exposed neonate, 96–97
Executive function
influence of polydrug use, 177
and prenatal alcohol exposure, 110, 117, 120
and prenatal cannabis exposure, 158–159, 161,
163–164
and self-regulation, 242
Exencephaly, 37
Experimental use of drugs, see under Drugs
Exposure
measurement, 11–12
self-report, 11
of maternal alcohol consumption, 99
standardization, 12
trends, 14
Externalizing behaviours, defined, 67

F
Facial dysmorphism
in alcohol-exposed fetal mice, 35, 36
diminishing with age, 97
palpebral fissures, 85, 87
philtrum, 35, 85, 87, 88
vermilion border of upper lip, 35, 85, 87, 88
in valproate syndrome, 38
Facial morphogenesis, normal, 29
Families Moving Forward, 242–243
Family
breakdown, and substance misuse, 212–213
external support, 212
importance of, 243
summer camp, 247–248
Fate mapping, 25
Fatty acid ethyl esters, 102–103
Fentanyl, 140
Fetal abstinence syndrome, 142
Fetal alcohol effects (FAE), 89, 219, 221–222
Fetal alcohol spectrum disorder (FASD), 8, 108
advocacy for children with, 245–247
Alert Program, 242
and attention-deficit–hyperactivity disorder, 117–118, 253–255
behavioural support, 244–245
and child abuse, 260
cognitive deficits, modifying interventions, 228–229
congenital heart defects, 95
diagnosis, 85
early detection, 92–93
family summer camp, 247–248
information resources, internet-based, 247
interventions
cognitive/behavioural, 234–248
empirically proven, 241
language/literacy training, 239–240
social skills training, 240–241
liver/kidney anomalies, 96
mortality in, 98–99, 105
psychiatric disorder, 228
psychosexual difficulties, 260, 265
siblings, mortality in, 99
specialist clinics, 266
suicide attempts, 228
transgenerational repetition, 235
see also Fetal alcohol effects, Fetal alcohol syndrome
Fetal alcohol syndrome (FAS), 8, 35, 85–105
adult services, 262–263
aetiology, 103–104
and attention-deficit–hyperactivity disorder, 253–255
autopsy case report, 36
basal ganglia changes, 95, 109
birth defect, identifying as, 229
brain abnormalities, 109–116
neuroimaging, 103, 109
brain imaging, 94, 97, 103
cardiac defects, 95
echocardiography, 97
case examples, 4, 267–268
central nervous system anomalies, 88–94, 94–95
cerebellar changes, 95
chromosomal analysis, 97
cocaine-exposed neonate, 139
cognitive impairments, 116–121
corpus callosum agenesis, 36, 95, 109
diagnosis, 85, 90
brain imaging, 97
criteria, 108
4-digit code, 85, 86
differential diagnosis, 90–92
eyearly detection, 92–93
facial features, iv, 4, 35, 85–88, 86, 96, 98
diminishing with age, 97
ethnic variation, 88
Families Moving Forward, 242–243
following heavy drinking in pregnancy, 16
follow-up, paediatric, 105
grey matter changes, 95
growth retardation, 88
hearing impairment, 97
historical perspective, 217–221
information resources, internet-based, 247
interventions
behavioural approaches, 263
psychotropic medication, 263–266
low birthweight, 96
magnetic resonance imaging, fetal, 103
maternal factors, 224
maternal mortality, 98
microcephaly, 94–95, 103, 109
mortality, 105
in mothers, 98
ocular defects, 96, 97
neonatal presentation, 93, 93–97
low birthweight, 93–94
neonate, examination, 96–97
NOFAS/NOFAS-UK, 230
partial (pFAS), 89–90, 90, 219
mortality, 105

285
prenatal presentation, 103–104
preterm birth, 93, 96
prevention
  programmes, 217–221
  international, 219–221
  warning notices, 217, 229
public health approach, 229
railroad track ears, 87
recognition, 85
risk of developing later substance-misuse/mental-health disorders, 205
sexually inappropriate behaviour, 267–268
skeletal anomalies, 96
studies, 221–222
Tuesday Group, 223
ultrasonography, fetal, 103
white matter changes, 95
see also Fetal alcohol effects, Fetal alcohol spectrum disorder
Fetal anticonvulsant syndromes, 45, 48, 49–53
differential diagnosis with fetal alcohol syndrome, 91
Fetal development, see Human development, and under Brain
Fetal hydantoin syndrome, 7, 45–47, 49–50
differential diagnosis with fetal alcohol syndrome, 91
see also Phenytoin
Fetal programming, 1
Fetal teratogen syndromes, 252–268
  and attention-deficit–hyperactivity disorder, 252, 257, 258, 260, 268
and autism spectrum disorders, 252, 255–256, 257
diagnosis
  early, 257–258
  later, 258–259
intellectual impairment, 252, 256
mental health problems, 256–261
psychotropic medication, 264–266
specialist clinics, 266
suicide, 256
support groups, 266–267
Fetal valproate syndrome, 38, 50–52
autism spectrum disorder, 51–52
cleft palate, 51, 252
differential diagnosis with fetal alcohol syndrome, 91
foot deformities, 51
genito-urinary malformations, 51
infant/childhood facies, 50
joint laxity, 51
neural tube defects, 51
optic atrophy, 51
radial ray defects, 51
septo-optic dysplasia, 51
see also Sodium valproate, Valproic acid
Fluoxetine, 59
neonatal effects, 60
neurodevelopment, long-term, 60–62, 67, 69
Fluvoxamine, 59, 69, 76
Folic acid, 53
pre-conception, in epilepsy, 272
Foster care, 3, 4, 131
  children with prenatal alcohol exposure, 123
  children with prenatal cocaine exposure, 139
  children in substance-misusing families, 209, 212
risk factor for fetal alcohol syndrome, 98
Functional magnetic resonance imaging (fMRI), see under Magnetic resonance imaging
G
Genetic factors, 1, 3
Genito-urinary abnormalities
  and sodium valproate, 46, 51
Grey matter, see under Brain
Growth retardation, in fetal alcohol syndrome, 88, 94
H
Hallucinogens, 15, 174
Haloperidol, 73, 263
  long-term outcome, 74–75, 76
Hand defects, in alcohol-exposed neonate, 96, 97
Hashish, see Cannabis
Head circumference, reduced in fetal alcohol syndrome, 96
Health care services
  disengagement with, 3
Hearing impairment, in fetal alcohol syndrome, 97
Heart defects, see Cardiac defects
Hepatitis, 2
Heroin, 8, 140
  global production, 141
  neonatal abstinence syndrome, 202
  prenatal exposure and attention-deficit–hyperactivity disorder, 143
see also Opiates
Hippocampus, see under Brain
History taking
  maternal alcohol consumption, 97
HIV, see Human immunodeficiency virus
Hockey stick palmar crease, 96, 97
Holoprosencephaly, 33–36, 35
  in fetal alcohol syndrome, 95
Human development, 23–40
  animal models, 23–24
  mouse, correlations with, 24
see also Animal studies, and under Brain
Human immunodeficiency virus (HIV) infection, 2
  maternal and in utero opiate exposure, 142
Hydacaone, 140
Hypnotics, 265–266
I

Ice, see Methamphetamine
Imipramine, 60, 62
Infant development, factors affecting, 2, 3
Infant mortality, see under Mortality
Infanticide, 8
Intellectual impairment
terminology, 252
see also Learning disability
Internalizing behaviours
defined, 67
pharmacotherapy, 67
Interventions
alcohol
in fetal alcohol spectrum disorder, 234–248
in pregnancy, 100–101
postnatal, 223–224
strategies, 217–230
behavioural, 234–248, 244
drugs, 209, 211
Intrauterine growth retardation
in cocaine-exposed neonate, 132
in opiate-exposed neonate, 142, 146
Iron deficiency anaemia
in cocaine-exposed neonate, 132

J
Joint laxity, in fetal valproate syndrome, 51

L
Labelling
of drugs, 272–273
public health messages, 19, 217–218, 220, 220–221, 229
Lamotrigine, 7, 46, 52, 54
cleft lip/palate, 47
Language skills
and prenatal alcohol exposure, 118
and prenatal cocaine exposure, 135
Lead exposure, 139
Learning disability, 1
and prenatal alcohol exposure, 118–119, 238
terminology, 252
support groups, 267
Levetiracetam, 7, 46
Levomepromazine, 74
Levomethadyl acetate, 140
Looked-after child, see Foster care
Lorazepam, 265
Low birthweight, 2
in fetal alcohol syndrome, 93–94, 96
and maternal alcohol use, 96
and maternal cocaine use, 132, 136
and maternal opiate use, 142, 146
and maternal smoking, 184
Low-to-moderate drinking, definition, 13

Lung function, reduced, following prenatal nicotine exposure, 185
LSD, see Hallucinogens

M
Magnetic resonance imaging
in fetal alcohol syndrome, 94, 97, 103
functional, 162
in prenatally cannabis-exposed young adults, 162–163
grey matter changes, 112
of mouse brain, 33
in prenatally alcohol-exposed individuals, 111, 275
in prenatally buprenorphine-exposed individuals, 146
in prenatally methamphetamine-exposed children, 177
in prenatally opiate-exposed children, 143
Maintenance therapy, 201
during pregnancy, 144–147, 278
see also Buprenorphine, Methadone
Marijuana, see Cannabis
Maternal drinking, see under Alcohol
Maternal mortality
in fetal alcohol syndrome, 98
and substance misuse, 199
Maternal risk factors, for fetal alcohol syndrome, 97–99
MDMA (ecstasy), 9, 14, 169–179
and alcohol use, 171
cognitive and social deficits, 173
hyperthermia, 173
neurochemical effects, 169–170
neuropsychiatric effects, 173
prenatal exposure
and aggressive behaviour, 177
and congenital malformations, 174
neurocognitive effects
in animals, 175–176
in infants, 176–178
raves, use at, 170
sudden death, 173
and tobacco use, 171
use prevalence
in pregnant women, 171–172
trends in, 15
in young adults, 170–171
Meconium screen
for in utero alcohol exposure, 102
for maternal drug use, 131
Medikinet XL, 264
Melatonin, 266
Mental health disorders, 77–78
and dependent drug use, 16
psychometric measures, commonly used, 258

287
and specific syndromes, see under those syndromes
see also Psychiatric disorder, and specific disorders
Mental retardation, see Learning disability
Mesoridazine, 75
Methadone, 8, 16, 140, 144–146, 201
  prenatal exposure
    and aggressive behaviour, 177
    and attention-deficit–hyperactivity disorder, 146
  developmental outcome, 145
  and neonatal abstinence syndrome, 145, 202
see also Maintenance therapy
Methamphetamine (ice, crystal meth), 169–179
  prenatal exposure
    low birthweight, 178
    neurochemical effects, 169–170
    neurocognitive effects
      in animals, 175–176
      in infants, 176–178
    neuroimaging of children, 177
    neuropsychiatric effects, 173
    sold as ecstasy, 171
    use prevalence
      in pregnant women, 171–172
      in young adults, 171
Methylphenidate, 262
  in ADHD, 264
Mice
  prenatal development, 30, 31, 32, 34, 35
  correlation with humans, 24
  following alcohol exposure, 35, 36, 37
  magnetic resonance imaging, 33, 39
see also Animal studies
Microcephaly
  in Cornelia de Lange syndrome, 91
  in Dubowitz syndrome, 91
  in fetal alcohol syndrome, 94–95, 103
  in maternal phenylketonuria, fetal affects, 91
  in Williams syndrome, 90, 91
Midwife, specialist, 200, 201
Mirtazapine, 59
Moderate drinking, definition, 13
Morphine, 140
  neonatal abstinence syndrome, 202
  prenatal exposure in rats, 142
Mortality
  infant, and maternal smoking, 184, 185
  maternal, in fetal alcohol syndrome, 98
see also Sudden infant death
Motherisk, 60, 271
Motor skills, and prenatal alcohol exposure, 119, 238

National Organization on Fetal Alcohol Syndrome,
see NOFAS
Neglect, see Child abuse/neglect
Neocortex, see under Brain
Neonatal abstinence syndrome, 4, 142, 147, 202
  breastfeeding, 202
  buprenorphine, attenuating effects, 146
  combined prenatal tobacco–opiate exposure, 146
  methadone, attenuating effects, 145
Neonate
  alcohol-exposed, examination, 96–97
Noepinephrine, and methamphetamine use, 170
Neuroimaging, see Magnetic resonance imaging
Neuroleptics, 73–74
Nicotine, see Smoking (tobacco)
NOFAS/NOFAS-UK, 230
Noonan syndrome, differential diagnosis with fetal
  alcohol syndrome, 91
Nortriptyline, 62

O
Obesity, following prenatal nicotine exposure, 185
Ocular defects
  and antiepileptic drugs, 46, 49
  in fetal alcohol syndrome, 96
  ophthalmological evaluation, 97
  in fetal valproate syndrome, 51
Olanzapine, 72, 76
Opiates, 17
  classification, 140–141
  dependence
    maintenance therapy, 144–147
    in pregnancy, 278
  prenatal exposure, 142
    animal studies, 142
    attention-deficit–hyperactivity disorder, 143
    cocaine–opiate combination, 143
    developmental outcome, 142–144
    fetal abstinence syndrome, 142
    intrauterine growth retardation, 142
    low birthweight, 142
    and maternal HIV infection, 142
    neonatal abstinence syndrome, 142, 202
    neurodevelopmental outcome, 142–144
    preterm birth, 142
    stillbirth, 142
    sudden infant death syndrome, 142
    use in pregnant women, 141–142
use prevalence, 15–16
trends in, 15
withdrawal effects, 8
see also individual drugs
Opium, 141
Oxycodone, 140
Oxycontin, 141

P

Palpebral fissures, short
in Du Bouwer syndrome, 91
in fetal alcohol syndrome, 4, 85, 87
differential diagnosis, 92
measurement, 86
in phenylketonuria, maternal, fetal effects, 91
in velocardiofacial syndrome, 90
in Williams syndrome, 90, 91
Parent–Child Assistance Program (PCAP), 219,
224–229
Paroxetine, 59, 62, 67, 69
Partial fetal alcohol syndrome (pFAS), 89–90, 90,
219
mortality, 105
Phenobarbitone, 46, 52
in fetal teratogen syndrome, 266
Phenothiazines, 72, 73
long-term outcome, 74
Phenylketonuria, maternal, differential diagnosis
with fetal alcohol syndrome, 91
Phenytoin, 46
cardiac defects, 47
cleft lip/palate, 47, 49
in fetal teratogen syndrome, 266
folic acid deficiency, 53
see also Fetal hydantoin syndrome
Philtrum, flat/long/smooth
in Cornelia de Lange syndrome, 90, 91
in fetal alcohol syndrome, 4, 35, 85, 87
differential diagnosis, 92
in Noonan syndrome, 91
in phenylketonuria, maternal, fetal effects, 91
Polydrug use
in cocaine-using women, 139
in epilepsy, 45, 46, 47, 48
and MDMA/methamphetamine use, 172
in opiate-using women, 141–142
Poor neonatal adaptation syndrome (PNAS), 60
Poverty, and dependent drug use, 16
Pregnancy, unplanned, 13
Pregnancy and Health Program (PHP), 217–218
Prescription medications, 11
see also individual drugs
Preterm birth, 2
in fetal alcohol syndrome, 93–94, 96
and maternal alcohol use, 96
moderate drinking, 17
and maternal cocaine use, 132
and maternal opium use, 142
and maternal smoking, 184
neurocognitive development, 57
Prevalence estimates of substance use, see under
Drugs, and individual substances
Prevention, of fetal alcohol syndrome, see under
Fetal alcohol syndrome
Primidone, 48
Problem drinkers, see under Alcohol
Psychiatric disorder, 2, 7, 17, 56
assessment, 259
psychometric measures, commonly used, 258
and in utero alcohol exposure, 17
see also Mental health disorders, and specific dis-
orders
Psychometric measures, commonly used, 258
Psychosis, 2, 7, 70–77
in cocaine-using women, 133
pharmacotherapy, 71–77
long-term neurodevelopment, 72–77
neonatal effects, 72
untreated, 71
Psychostimulants, 264
Public health advice
bottle labelling/warning notices, 19, 217–218,
220, 220–221, 229
see also Advice to pregnant women

Q

Questionnaires, for identifying problem drinking,
99–100
Quetiapine, 72, 75, 76

R

Radial ray defects, in fetal valproate syndrome, 51
Railroad track ear, in fetal alcohol syndrome, 87,
96, 97
Rats, see Animal studies
Raves, and MDMA/methamphetamine use, 170,
172
Recreational use of drugs, see under Drugs
Renal anomalies, in fetal alcohol spectrum disorder,
96, 97
Respiratory illness following prenatal nicotine
exposure, 185
Retinoids, 271
Risperidone, 72, 75, 76, 264

S

Schizophrenia, 71
Screening tools, for identifying problem drinking,
99–100
Selective serotonin reuptake inhibitors (SSRIs), 59
neonatal effects, 60, 274
neurodevelopment, long-term, 60–70
Serotonin, and MDMA/methamphetamine use, 170, 176
Sertraline, 59, 62, 67, 69
Sexual abuse, see Child abuse
Sexually inappropriate behaviour, 267–268
Skeletal anomalies, in fetal alcohol syndrome, 96
Smoking (cannabis), see Cannabis
Smoking (crack cocaine), see under Cocaine
Smoking (tobacco), 16
and drinking, 94
during pregnancy, 183–193
consequences in offspring, 184–186
aggression, 191
susceptibility gene, 192
asthma, 185
attention-deficit–hyperactivity disorder, 189, 190, 191
behavioural problems, 188–193, 189
genetic vs environmental factors, 192
sex differences, 191
cancers, 186
cleft lip/palate, 184
cognitive impairment, 186–188
conduct disorder, 189, 190, 191
criminal offending, 189, 190
delinquency, 189, 190
diabetes, type II, 186
fetal growth restriction, 184
infant mortality, 184, 185
low birthweight, 184
lung function, reduced, 185
neonatal abstinence syndrome, 146
obesity, 185
oppositional defiant disorder, 189, 190, 191
sudden infant death syndrome, 185
prevalence, 183, 271
Social services
disengagement with, 3
Sodium valproate, 7, 45, 46
autism, 255
cardiac defects, 47
cognitive development, 49
facial dysmorphism, 47
in fetal teratogen syndrome, 266
long-term problems, 273
polytherapy, 47, 48
speech and language delay, 48
spina bifida, 47
see also Valproic acid
Sonic hedgehog, 39–40
Specialist clinics, 266
Speech and language delay, and sodium valproate, 48
Spina bifida, and antiepileptic drug exposure, 47, 50
Spontaneous abortion
and heavy drinking, 16
and moderate drinking, 17
Standard drink, 12, 13, 99
Stillbirth
and heavy drinking, 16
and maternal opiate use, 142
and moderate drinking, 17
Substance misuse/abuse, see Drugs, and individual substances
Sudden infant death
and maternal alcohol use, 99
and maternal cocaine use, 134
and maternal opiate use, 142
and maternal smoking, 185
Suicide attempts
in fetal alcohol spectrum disorder, 228
in fetal teratogen syndrome, 256
Sulpiride, 75

T
Teenage pregnancy, and depression, 57
Teratogen
induced brain insult, 32–40
see also under Brain
see also Fetal teratogen syndromes, and specific teratogens
Tetracycline, 272
Thalidomide, 252, 271
Thioridazine, 75
Thioxanthines, 72
Tobacco smoking, see Smoking, tobacco
Topiramate, 7, 46, 52
Tricyclic antidepressants (TCAs), 58–59
neurodevelopment, long-term, 60–70
Trifluoperazine, 75
Tuesday Group, 223

U
Ultrasonography, cerebral, in diagnosis of fetal alcohol syndrome, 97, 103
Unplanned pregnancy, 13
and depression, 57
and MDMA use, 171
Upper lip, thin vermilion border
in Cornelia de Lange syndrome, 91
in fetal alcohol syndrome, 4, 35, 85, 87
differential diagnosis, 92
in fetal teratogen syndromes, 90
in phenylketonuria, maternal, fetal effects, 91

V
Valproic acid, 50–52
anencephaly, 37
spina bifida, 37
see also Fetal valproate syndrome, Sodium valproate
Velocardiofacial syndrome, in differential diagnosis of fetal alcohol syndrome, 90
Venlafaxine, 59, 67–69
Vermilion border, see Upper lip
Vigabatrin, 266
Violence
alcohol-related, 223, 260
  risk of poor outcomes in children, 211
  in cocaine-using women, 139
  domestic, 2, 5, 131
  and substance misuse, 209
Visual impairments, see Ocular defects
Visuospatial skills, and prenatal alcohol exposure, 118
Vitamin K deficiency, 47
  in fetal hydantoin syndrome, 49
W
Warning labels, on alcoholic beverages, 19, 220,
  220–221, 229
White matter, see under Brain
Williams syndrome, in differential diagnosis of fetal
  alcohol syndrome, 90, 91
Z
‘Z’ drugs (zopiclone/zolpidem/zaleplon), 266
Ziprasidone, 72
Zuclopenthixol, 75