

Access to Higher Education Unit

This unit forms part of an Access to HE Diploma. If delivering the graded version of this unit, please refer to the Provider Handbook for details on grading descriptors and the application of these across units within your programme.

Unit Title: Maternal Health

Graded Unit Reference Number: GA33BIO50

Ungraded Unit Reference Number: UA33BIO50

Module: Biology

Level: Three (3)

Credit Value: Three (3)

Minimum Guided Learning Hours: 30

Learning Outcome (The Learner will):	Assessment Criterion (The Learner can):
1. Understand the development, diagnosis, and care of gestational diabetes	1.1 Explain the potential risk factors for developing gestational diabetes.
	1.2 Describe the diagnostic process for gestational diabetes, including signs and symptoms.
	1.3 Outline appropriate care planning and management strategies for a pregnant person diagnosed with gestational diabetes.
2. Understand the development, diagnosis, monitoring, and potential risks of pre-eclampsia	2.1 Identify factors that increase the risk of developing pre-eclampsia during pregnancy.
	2.2 Explain the signs and symptoms that lead to a diagnosis of pre-eclampsia.
	2.3 Describe care planning and monitoring approaches for managing pre-eclampsia.
	2.4 Explain the potential complications of unmanaged pre-eclampsia, including eclampsia.
3. Examine the dangers of substance misuse during pregnancy	3.1 Analyse the health risks to the pregnant person and foetus associated with alcohol consumption during pregnancy.

Indicative Content

Learners could cover the following:

(The information below is provided for guidance only and is not mandatory)

LO1	AC1.1 Risk factors: family history of diabetes; previous gestational diabetes; BMI ≥ 30; maternal age ≥ 40; PCOS; family origin (South Asian, Chinese, African-Caribbean, Middle Eastern); having previously given birth to a baby $>4.5\text{kg}$; previous gastric bypass; multiple pregnancy. Lifestyle influences: diet, physical inactivity, weight gain pre-pregnancy. Clinical relevance: how combined risk factors increase likelihood; importance of antenatal screening AC1.2 Symptoms: increased thirst, polyuria, fatigue, blurred vision, recurrent UTIs, thrush; may also be asymptomatic. Clinician-led observation: signs of hyperglycaemia; larger-than-expected foetal growth; excess amniotic fluid. Screening pathway: risk-factor identification at booking appointment (8–12 weeks); oral glucose tolerance test (OGTT) at 24–28 weeks or later if indicated. OGTT procedure: fasting requirements, two-stage blood test, glucose thresholds for normal/borderline/diabetic results. Additional indicators: foetal ultrasound, amniotic fluid volumes. AC1.3 Information and education: condition overview, blood sugar management, lifestyle guidance. Monitoring: 1–2 weekly clinical reviews; self-monitoring of blood glucose using capillary testing; recommended target levels (e.g., $<5.3\text{ mmol/L}$ before meals, $<7.8\text{ mmol/L}$ 1 hour post-meals). Dietary management: low GI foods, balanced meals, fibre intake, NHS Eatwell guidance. Physical activity: 150 minutes moderate intensity per week; reducing sedentary time. Medication: metformin (mechanism & side effects), insulin injections (dose changes as pregnancy progresses). Foetal monitoring: additional ultrasounds, growth checks. Birth planning: considerations for induction or caesarean section due to macrosomia risk.
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	Post-partum care: risk of type-2 diabetes; future pregnancy risk; continued monitoring.
LO2	AC2.1 Risk factors: maternal age ≥ 40; first pregnancy; multiple pregnancy; BMI ≥ 35; chronic hypertension; diabetes; kidney disease; autoimmune conditions (e.g., lupus); family history of pre-eclampsia; long interval (>10 years) between pregnancies; previous pre-eclampsia; history of premature birth. Emerging research: potential placental development factors. Preventative considerations: aspirin prophylaxis, weight/BMI review, stopping smoking/substance use. AC2.2 Common symptoms: hypertension ($\geq 140/90$), proteinuria, swelling (face, hands, ankles), blurred vision, headaches, RUQ/epigastric pain, nausea, general malaise. Severe symptoms: vision loss, sudden swelling, vomiting, confusion. Silent presentation: no symptoms, importance of antenatal checks. Clinical tests: BP measurement; urine dipstick for protein; blood tests (creatinine, liver function); assessment of reduced placental blood flow (Doppler ultrasound); PIGF testing. Foetal indicators: small for gestational age (SGA), reduced oxygen/nutrient supply. AC2.3 “Watch and wait” approach: outpatient monitoring for moderate hypertension; weekly BP and urine checks; blood tests for kidney/liver function; ultrasound checks for foetal growth; lifestyle recommendations (reduced salt intake, NHS dietary guidance, hydration). Hospital admission: for severe cases or worsening symptoms. Medication: antihypertensives (labetalol, nifedipine, methyldopa – mechanism awareness). Clinical surveillance: vital signs monitoring, assessment for organ involvement, management of complications. Birth planning: early induction or caesarean based on severity and gestational age (<34 weeks, 34–36 weeks, ≥ 37 weeks). Foetal wellbeing monitoring: heart rate, fundal height, amniotic fluid levels. Post-natal monitoring: 6–8 week follow-up for postpartum pre-eclampsia risk. AC2.4 Maternal risks: organ damage (liver, kidneys, brain), HELLP syndrome, cardiovascular complications, seizures (eclampsia), stroke, blood clots. Foetal risks: reduced placental blood flow, restricted growth (SGA), premature birth, hypoxia, stillbirth. Eclampsia: seizure mechanism; symptoms (twitching, convulsions,

	unconsciousness); warning signs (severe headache, blurred vision, swelling). Treatment context: magnesium sulphate for seizure control; emergency stabilisation; high-risk delivery planning. Clinical urgency: life-threatening potential of unmanaged disease.
LO3	AC3.1 Physiology: alcohol crosses placenta; foetal liver underdeveloped. Maternal risks: premature labour, miscarriage, stillbirth. Foetal risks: SGA, low birth weight, organ damage (respiratory, cardiac, neurological), impaired brain development. Foetal Alcohol Spectrum Disorder (FASD): neurodevelopmental issues, motor difficulties, delayed speech, emotional regulation issues, impulse control issues, sensory processing complications. Dose-related risk: higher consumption increases complications; safest level = abstinence. Clinical support: discussing alcohol use, reassurance for unintentional early pregnancy exposure. AC3.2 General effects: premature birth, underweight delivery, miscarriage, stillbirth. Class-specific effects: - Cocaine/methamphetamine: placental abruption, premature membrane rupture. - Ecstasy (MDMA): birth defects, motor development issues. - Heroin/opioids: neonatal abstinence syndrome (NAS), SIDS risk. - Cannabis: premature birth, low birth weight.