

Condition	Symptoms	Fundoscopy appearance	Management
Retina			
Diabetic retinopathy	<ul style="list-style-type: none"> • Often none unless severe or complications (e.g. vitreous haemorrhage) 	<p><u>Non-proliferative</u> – <i>graded mild-severe</i></p> <ul style="list-style-type: none"> • Microaneurysms (dots) – <i>only change in mild</i> • Haemorrhages (blots) • Venous beading • Intraretinal microvascular anomalies • Hard exudates – lipid deposits (well defined) • Cotton wool spots – infarcts (not well defined) <p><u>Proliferative</u></p> <ul style="list-style-type: none"> • Any neovascularisation 	<ul style="list-style-type: none"> • Pan-retinal photocoagulation (for proliferative retinopathy) • Focal or grid laser photocoagulation (for maculopathy) • Intravitreal anti-VEGF • Optimise diabetic control
Retinal laser photocoagulation scars	N/A	<p><u>Pan-retinal laser photocoagulation scars</u></p> <ul style="list-style-type: none"> • Hundreds of dots of laser burns across wide area of retina (avoiding major vessels and macula) <p><u>Focal or grid laser photocoagulation scars</u></p> <ul style="list-style-type: none"> • Smaller areas of laser burns in dots or grids near macula 	N/A
Hypertensive retinopathy	<ul style="list-style-type: none"> • Most patients have no symptoms 	<p><u>Grade 1</u></p> <ul style="list-style-type: none"> • Arteriolar narrowing <p><u>Grade 2</u></p> <ul style="list-style-type: none"> • + AV nicking • + Silver wiring <p><u>Grade 3</u></p> <ul style="list-style-type: none"> • + Retinopathy (flame haemorrhages, hard exudates, cotton wool spots) <p><u>Grade 4</u></p> <ul style="list-style-type: none"> • + Papilloedema 	<ul style="list-style-type: none"> • Treat hypertension
Retinal artery occlusion	<ul style="list-style-type: none"> • Sudden painless loss of all (central occlusion) or part (branch occlusion) of vision 	<ul style="list-style-type: none"> • Swollen, pale (oedematous) retina • Cherry red spot (fovea) 	<ul style="list-style-type: none"> • <6hours → reduction of intraocular pressure
Retinal vein occlusion		<ul style="list-style-type: none"> • Tortuous dilated vessels • Widespread retinal haemorrhages ('stormy sunset') 	<ul style="list-style-type: none"> • No specific treatment • Laser for neovascularisation
Retinal detachment	<ul style="list-style-type: none"> • 4 F's: Floaters, Flashes, Fall in acuity, Field loss • "Curtain falling over vision" 	<ul style="list-style-type: none"> • Grey opalescent retina, ballooning forwards 	<ul style="list-style-type: none"> • Surgical vitrectomy and gas tamponade • Then cryo/laser coagulation to secure retina
Retinitis pigmentosa	<ul style="list-style-type: none"> • Deteriorating night vision • Tunnel vision 	<ul style="list-style-type: none"> • Bone-spicule shaped peripheral pigmentation • Arteriolar narrowing • Waxy disc pallor 	<ul style="list-style-type: none"> • No cure • Genetic counselling • Symptomatic management
Macula			
Dry macular degeneration	<ul style="list-style-type: none"> • Progressive central visual deterioration 	<ul style="list-style-type: none"> • Drusen in macula area (tiny yellow/white deposits) 	<ul style="list-style-type: none"> • No treatment • Stop smoking
Wet macular degeneration		<ul style="list-style-type: none"> • Subretinal haemorrhages in/around macula • Localised retinal elevation and retinal oedema 	<ul style="list-style-type: none"> • Intravitreal anti-VEGF • Photodynamic therapy • Laser photocoagulation
Disc			
Optic neuritis	<ul style="list-style-type: none"> • Reduced visual acuity • Loss of red colour vision 	<ul style="list-style-type: none"> • Swollen optic disc (blurred margin) 	<ul style="list-style-type: none"> • Methylprednisolone for MS-associated optic neuritis (most)
Optic atrophy	<ul style="list-style-type: none"> • Central scotoma • Afferent pupillary defect 	<ul style="list-style-type: none"> • Pale, featureless optic disc (like sun setting) 	<ul style="list-style-type: none"> • No specific treatment • Treat cause to save remaining function
Papilloedema	<ul style="list-style-type: none"> • Signs of raised intracranial pressure • Vision usually normal 	<ul style="list-style-type: none"> • Bilateral swollen optic discs (blurred margins) 	<ul style="list-style-type: none"> • Treat cause of raised intracranial pressure
Chronic open angle glaucoma	<ul style="list-style-type: none"> • Asymptomatic until vision severely impaired 	<ul style="list-style-type: none"> • Optic disc cupping (optic cup > 1/3 of disc) • Optic disc atrophy 	<ul style="list-style-type: none"> • β-blocker eye drops • Prostaglandin eye drops • α-agonist eye drops • Carbonic anhydrase inhibitors
Vitreous			
Vitreous haemorrhage	<ul style="list-style-type: none"> • Sudden painful visual loss or haze 	<ul style="list-style-type: none"> • No red reflex • Difficult/impossible to visualise retina 	<ul style="list-style-type: none"> • Treat cause e.g. diabetic retinopathy, retinal detachment/tear