

# Preface

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Of patients with epilepsy, 4–7% have reflex seizures alone or together with spontaneous seizures.

Reflex epileptic seizures denote epileptic seizures that are consistently elicited by a specific ‘precipitating’ stimulus. The term ‘precipitating stimulus’ should be differentiated from ‘facilitating stimulus’. In some patients for example EEG discharges or seizures may increase during intermittent photic stimulation (IPS) (facilitating stimulus), but are not consistently evoked by IPS (as would be expected with precipitating stimuli).

The precipitating stimulus evoking an epileptic seizure is specific for a given patient and may be extrinsic, intrinsic or both. Extrinsic stimuli are (a) simple, such as flashes of light, elimination of visual fixation and tactile stimuli and (b) complex, such as reading or music. Intrinsic stimuli are elementary, such as movements, or elaborate, such as those involving higher brain function, emotions and cognition (thinking, calculating, music or decision-making). Intermittent photic stimulation is the most common stimulus triggering epileptic seizures.

Reflex seizures may be (a) generalised, such as absences, myoclonic jerks or generalised tonic clonic seizures or (b) focal, such as visual, motor or sensory.

The role of the EEG is fundamental in establishing the precipitating stimulus in reflex epilepsies, because it allows subclinical EEG reflex abnormalities, or minor clinical ictal events, to be reproduced on demand by application of the appropriate stimulus without risk to the patient. However, there are cases in which the stimulus–seizure relationship is difficult to document, as in video game-induced seizures.

Management is syndrome related. Antiepileptic drugs may not be needed in patients with reflex seizures only. Avoidance of precipitating stimulus may be adequate.

This concise booklet provides a physician-friendly modern review of all types of reflex seizures and related reflex epilepsy syndromes that I have studied from the early days of my medical career (Ph.D. on photosensitive epilepsy) and continue to date (fixation-off sensitivity, Jeavons syndrome, reading epilepsy). Prevalence, clinical features, EEG manifestations, pathophysiology and treatment are meaningfully described. Key points of practical clinical significance are emphasised. The aim is to assist health care professionals in optimising the diagnosis and management of patients with reflex seizures.

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