MADISON NEUROLOGY · NEUROLOGY SYMPTOM GUIDE

Double vision

Structured history, interpretation & clinical review

Symptom 44 of 94
Clinical educational workbook
Version 1.0 · October 2026

Not for clinical use. This guide cannot diagnose, triage, or exclude an emergency. Seek emergency care for severe, sudden, or worsening symptoms.

Contents

Scope and safe use 3

Section 1: Input form 4

- 1A. Immediate safety screen 4
- 1B. Timeline 4
- 1C. Discriminating features 4
- 1D. Associated findings 5
- 1E. Clinical context 5

Section 2: Interpreting the input form 7

Section 3: Clinical review 9

Selected references 10

> **Document purpose**
> A structured educational history and diagnostic-reasoning workbook. Treatment is outside its scope.

Scope and safe use

Double vision is first separated into monocular versus binocular, then by direction, variability, pupil/eyelid findings, pain, and other cranial or neurological signs.

Not for clinical use.
This educational workbook does not diagnose, triage, estimate probability, replace examination, or exclude an emergency. If a safety-screen answer is Yes or uncertain, follow the stated action rather than continuing routine interpretation.

How to complete the workbook

- Record the current episode and the person’s usual baseline; use a witness account for events with impaired awareness.
- Check one option per question unless a clinician documents a different combination. “Not sure” is unresolved information, not a negative answer.
- Complete the safety screen before all other sections. Record exact onset or last-known-well time for sudden deficits.
- Use Section 2 only after the form is complete. More than one pattern may be relevant; urgency takes precedence.
- Use Section 3 to plan focused examination and clinician-selected investigations. No test is automatic or universally required.

Specific escalation rule

New severe headache, new focal weakness or numbness, new speech/language difficulty, reduced consciousness, a prolonged seizure, severe breathing or swallowing difficulty, sudden visual loss, or rapidly progressive weakness requires emergency assessment. Call 911 in the United States.

Section 1: Input form

Checkbox history for Double vision

1A. Immediate safety screen

Is there sudden visual loss, a curtain or missing field, or a new large shower of floaters or flashes?

☐ No ☐ Yes ☐ Not sure

If Yes: Contact an emergency eye service or emergency department now.

Is there a painful red eye, halos, vomiting, marked light sensitivity, or pain with eye movement?

☐ No ☐ Yes ☐ Not sure

If Yes: Seek same-day emergency eye assessment; sudden visual loss requires emergency care now.

Is there new double vision with weakness, severe headache, confusion, imbalance, or difficulty speaking?

☐ No ☐ Yes ☐ Not sure

If Yes: Call emergency services now and record onset or last-known-well time.

Is there eye protrusion, fever, eyelid swelling, new inability to move the eye, or recent eye trauma?

☐ No ☐ Yes ☐ Not sure

If Yes: Seek emergency eye/orbital assessment now.

> **Stop rule:** Any Yes answer triggers the action printed under that question. Any Not sure answer requires prompt in-person clarification; do not treat it as No.

1B. Timeline

How did the symptom begin?

☐ Suddenly, over seconds or minutes ☐ Over hours to days ☐ Gradually over weeks or months ☐ Longstanding or since childhood ☐ Not sure

Use the first occurrence for recurrent episodes; use the current episode for a changing symptom.

What is the overall course?

☐ One persistent episode ☐ Separate recurrent episodes ☐ Steadily worsening ☐ Fluctuating or variable ☐ Currently resolved

Has this exact pattern been assessed before?

☐ Definitely new ☐ The same pattern occurred before ☐ Present and stable for a long time ☐ Not sure

1C. Discriminating features

What happens when either eye is covered?

☐ Double vision disappears with either eye covered ☐ It remains in one eye when the other is covered ☐ Not tested

Test while looking at a fixed object; do not drive or operate machinery with double vision.

When is separation worst?

☐ Distance viewing or one gaze direction ☐ Near viewing ☐ All directions similarly ☐ Changes with fatigue or time

Is there a drooping lid, unequal pupil, or limited eye movement?

☐ Drooping eyelid ☐ Unequal or poorly reactive pupil ☐ Observable limited eye movement ☐ None

Is there headache, orbital pain, or recent trauma?

☐ New severe headache or neck pain ☐ Orbital pain or swelling ☐ Recent head/eye trauma ☐ None

1D. Associated findings

Are there other neurological symptoms—weakness, numbness, speech change, double vision, swallowing difficulty, or severe imbalance?

☐ Yes ☐ No ☐ Not sure

Are there systemic clues—fever, weight loss, cancer, infection risk, pregnancy/postpartum status, or a new medication?

☐ Yes ☐ No ☐ Not sure

How much does this affect daily activity?

☐ Noticeable but activities continue ☐ Some activities are limited ☐ Cannot perform usual activities ☐ Not sure

1E. Clinical context

Who is being assessed?

☐ Adult or adolescent ☐ Child under 12 ☐ Adult aged 65 or older

Could a medicine, substance, withdrawal, or recent dose change be relevant?

☐ No plausible contributor ☐ Yes or possibly ☐ Not reviewed

Include sedatives, dopamine-blocking drugs, stimulants, decongestants, anticholinergics, alcohol, and non-prescribed substances when relevant.

Is there a relevant neurological, muscular, metabolic, cardiovascular, autoimmune, or sleep disorder?

☐ No known relevant condition ☐ Yes ☐ Not sure

What prior information is available?

☐ A previous examination or investigation ☐ Prior records but no clear explanation ☐ No useful prior assessment ☐ Not sure

Additional history and documentation

Record exact dates/times, witness details, relevant medication doses and changes, prior investigation reports, and the person's baseline function.

Section 2: Interpreting the input form

Answer combinations generate a differential and an assessment pathway—not a diagnosis.

> **Precedence:** Emergency safety answers override every pattern below. Otherwise, the highest-urgency fully matched pattern takes precedence. If entries are incomplete, contradictory, or match no pattern, use the unresolved-information pathway.

Pattern 1: Binocular diplopia with motor warning signs

What happens when either eye is covered? Double vision disappears with either eye covered
Is there a drooping lid, unequal pupil, or limited eye movement? Drooping eyelid / Unequal or poorly reactive pupil / Observable limited eye movement

Emergency warning pattern — Now

Binocular diplopia with ptosis, pupil change, or limited movement requires emergency cranial-nerve/vascular assessment.

Differential to review:

- Oculomotor, trochlear, abducens, or multiple cranial neuropathy
- Cavernous sinus, brainstem, or posterior-communicating artery process

Action: Call 911 or go to the nearest emergency department now. Do not drive yourself.

Pattern 2: Variable fatigable binocular diplopia

What happens when either eye is covered? Double vision disappears with either eye covered
When is separation worst? Changes with fatigue or time
What is the overall course? Fluctuating or variable

Urgent assessment pattern — Same day

Variable fatigable binocular diplopia follows a myasthenic and orbital assessment pathway.

Differential to review:

- Myasthenia gravis or thyroid/orbital eye disease
- Oculomotor, trochlear, abducens, or multiple cranial neuropathy

Action: Arrange same-day medical assessment. If symptoms are rapidly worsening or severe, call 911.

Pattern 3: Binocular diplopia without other reported signs

What happens when either eye is covered? Double vision disappears with either eye covered
Is there a drooping lid, unequal pupil, or limited eye movement? None
Is there headache, orbital pain, or recent trauma? None

Urgent assessment pattern — Same day

New binocular diplopia still needs prompt ocular-motor localization even without ptosis or pain.

Differential to review:

- Oculomotor, trochlear, abducens, or multiple cranial neuropathy
- Myasthenia gravis or thyroid/orbital eye disease

Action: Arrange same-day medical assessment. If symptoms are rapidly worsening or severe, call 911.

Pattern 4: Monocular optical diplopia

What happens when either eye is covered? It remains in one eye when the other is covered

Prompt clinical review pattern — Promptly

Persistence in one eye when the other is covered directs assessment to the optical structures of that eye.

Differential to review:

- Monocular optical, refractive, corneal, lens, or retinal cause

Action: Arrange an in-person medical or neurological review promptly, usually within days. Seek sooner care if the pattern changes.

Unresolved-information pathway: The entries need structured in-person characterization.

Urgent assessment pattern — Same day

Do not guess missing answers or convert uncertainty into reassurance. Document what is unknown, perform an in-person examination, clarify the timeline with a witness or records when available, and reassess if any new feature appears.

Action: Arrange same-day medical assessment. If symptoms are rapidly worsening or severe, call 911.

Section 3: Clinical review

Diagnostic modules and focused investigation logic

The examination comes before a test list. Select investigations only after localization, urgency, comorbidity, pregnancy status, renal function, anticoagulation, and prior results have been considered.

3.1 Oculomotor, trochlear, abducens, or multiple cranial neuropathy

Discriminating features: Binocular diplopia with gaze-dependent separation, ophthalmoplegia, ptosis, or pupil change.

Logical investigations: Urgent cranial-nerve examination; acute pupil-involving third-nerve signs or neurological deficits require emergency CTA/MRI pathways.

3.2 Myasthenia gravis or thyroid/orbital eye disease

Discriminating features: Variable/fatigable diplopia and ptosis suggest junction disease; pain, proptosis, exposure, or orbital signs suggest orbitopathy.

Logical investigations: Fatigability/orbital examination, targeted antibody/thyroid testing, eye-motility measurements and imaging as indicated.

3.3 Cavernous sinus, brainstem, or posterior-communicating artery process

Discriminating features: Headache, multiple cranial signs, pupil involvement, sensory loss, or other deficits.

Logical investigations: Emergency brain/orbital vascular imaging based on the pattern.

3.4 Monocular optical, refractive, corneal, lens, or retinal cause

Discriminating features: Diplopia persists in one eye when the other is covered.

Logical investigations: Prompt ophthalmic refraction, slit-lamp and retinal assessment; this is not typical of cranial neuropathy.

Reassessment and documentation

- If the symptom pattern changes, repeat the safety screen and timeline rather than carrying forward an earlier interpretation.
- If a test is unrevealing but the deficit persists or progresses, revisit localization and seek specialist review; a normal result does not automatically end assessment.
- If symptoms resolve, document duration, completeness of recovery, recurrence, and any residual deficit. Resolved sudden focal symptoms can still require urgent vascular assessment.
- If the history and examination conflict, obtain collateral information and in-person review rather than forcing a single diagnostic label.

Selected references

Sources provide background standards and do not replace local emergency pathways or current specialist guidance. Accessed October 2026.

1. National Institute for Health and Care Excellence. (2019, updated 2023). *Suspected neurological conditions: recognition and referral (NG127)*. https://www.nice.org.uk/guidance/ng127

2. American Academy of Ophthalmology. (2020). *Preferred Practice Pattern: Comprehensive Adult Medical Eye Evaluation*. https://www.aao.org/preferred-practice-pattern/comprehensive-adult-medical-eye-evaluation-ppp