

Clinical Criteria – CPT® 96000-96002, 96004 Motion analysis procedures

Subject: 96000-96002, 96004 Motion analysis procedures	Renewed Effective: 10/1/25
	Review Schedule: Annual

Description

- CPT 96001: Comprehensive computer-based motion analysis by videotaping and 3-D kinematics.
- CPT 96001: Comprehensive computer-based motion analysis by videotaping and 3-D kinematics, with dynamic plantar pressure measurements during gait or other functional activities.
- CPT 96002: Dynamic surface electromyography (surface EMG) performed while the patient is walking or performing functional movement to define timing/activation of skeletal muscles.
- CPT 96004: Represents only the professional component of the service, the interpretation of the test results—and should be billed in addition to the codes for the technical components (the actual performance of the tests).

Criteria for Approval:

Motion analysis (96000-96002 and/or 96004) is considered medically necessary and covered for members only when **ALL** of the following criteria are met:

1. Documented clinical indication consistent with an objective gait/movement problem or neuromuscular concern, for example:
 - Moderate–severe gait abnormality (e.g., antalgic gait, crouch gait, toe-walking with functional limitation).
 - Neuromuscular disease affecting ambulation (e.g., cerebral palsy, spina bifida, neuromuscular dystrophies) where muscle timing or biomechanics are suspected contributors.
 - Pre-operative planning for complex orthopedic procedures (e.g., multi-level osteotomies, tendon transfers) where findings will alter surgical planning.
 - Assessment for orthotic/prosthetic prescription or modification when clinical exam is insufficient to guide device selection.
 - Persistent functional impairment after trauma, prior surgery, or failed conservative care where motion analysis is needed to clarify cause.

2. Demonstrated potential to change management — the referring clinician must document how the results are expected to influence treatment (surgical plan, targeted serial casting/serial orthoses, botulinum toxin targeting, specific physical therapy modifications, orthotic or prosthetic selection). Tests requested for curiosity, baseline documentation only, or research without a defined plan to act on results are not covered.
3. Appropriate prior evaluation and conservative care when clinically reasonable (e.g., documented physical therapy trial, orthotic trial, medication management, spasticity management) unless urgent surgical planning or acute postoperative/trauma assessment justifies immediate testing.
4. Performed and interpreted by qualified personnel using validated/commercial motion analysis systems and properly calibrated equipment (video/3-D motion capture system, force plates/pressure platforms, and for 96002—surface EMG equipment with appropriate electrodes). The interpretation/report must be by a clinician with expertise in pediatric gait/motion analysis (orthopedic surgeon, physiatrist, pediatric neurologist, or other qualified specialist).
5. Complete documentation submitted with authorization/claim: history and physical exam focused on gait, prior conservative treatments, specific clinical question to be answered by testing, pre-test functional measures, and an explicit plan describing how results will guide care.

When codes may be requested together or separately

- 96000 is used when comprehensive computer-based motion analysis (video/3D kinematics) is required. 96001 is used when comprehensive computer-based motion analysis (video/3D kinematics ± dynamic plantar pressure) is required. 96002 is used when dynamic surface EMG is performed to assess muscle timing during movement. 96000/96001 and 96002 may be appropriate and billed together only when both distinct services are performed and documented (i.e., surface EMG results are separately acquired and interpreted and materially contribute to the clinical interpretation). 96000 and 96001 should not be billed together. Documentation must clearly support distinct data acquisition and interpretation components for each code. 96004 represents only the professional component of the service—the interpretation of the test results—and should be billed in addition to the codes for the technical components (the actual performance of the tests).

Coverage exclusions / not medically necessary

- Motion analysis for cosmetic assessment only, screening without symptoms, or purely research purposes without an actionable treatment plan is not covered.

- Routine observational gait assessment without the use of specified computer-based/pressure/EMG technology should not be billed with 96000/96001/96002.
- Duplicate testing without new clinical indication or evidence that prior results no longer apply is not covered.

Prior authorization / required documentation

Requests for 96000, 96001, 96002, and/or 96004 require prior authorization. Submit the following with the request:

- Current clinical notes documenting symptoms, functional limitations, and focused gait/movement examination.
- Prior conservative treatment documentation (PT notes, orthotic trials, medication/spasticity management) when applicable.
- Explicit clinical question: what management decision will depend on the test results (e.g., “determine which muscle groups to target for botulinum injection” or “determine need/type of multi-level surgery”).
- Relevant imaging/clinic studies (x-rays, MRI) if available.

Age-specific considerations (pediatrics)

- Timing of gait/motion analysis should align with developmental milestones and the clinical question; in very young children, testing may be limited by cooperation — document why testing is appropriate at the requested age.
- For progressive neuromuscular disorders, motion analysis may be covered to guide intervention timing or orthotic/prosthetic changes.
- Tests that primarily document baseline for school/administrative purposes without intended clinical action are not covered.

Sample ICD-10 codes that may support medical necessity (examples, not exhaustive)

- G80.0–G80.9 — Cerebral palsy subtypes
- Q66.5 — Congenital talipes equinovarus (clubfoot)
- R26.89 — Other abnormalities of gait and mobility
- M21.6x — Acquired deformity of limb (as applicable)

- Z96.6 — Presence of prosthetic limb (if assessing prosthetic function)
(Submit the specific diagnosis code(s) that match the member's condition and attach clinical documentation.)

Frequency / limits

- Repeat studies require justification that new clinical information is expected or prior results are no longer valid (e.g., post-surgical reassessment after interval healing, change in clinical status). Routine or periodic repeat testing without documented change in clinical status is not covered.

How to adjudicate a request (quick reviewer checklist)

- Is there a clear, specific clinical indication (see list above)?
- Will the test result materially affect management (documented by referring clinician)?
- Are prior conservative treatments tried/considered when appropriate?
- Is the testing being performed with appropriate technology by qualified personnel and will an interpreted report with recommendations be provided?
- Is the request cosmetic, screening, or research without actionable plan? If yes → deny.

Clinical rationale / evidence summary

Computerized motion analysis and dynamic surface EMG can identify kinematic abnormalities and abnormal muscle timing that are not reliably detected on clinical exam alone; when results are used to guide specific interventions (targeted surgery, botulinum toxin injection, orthotic selection, therapy modification), they can improve targeting and clinical outcomes. Coverage is therefore limited to situations where testing is expected to change management.