



Home → Health Topics → Brain Tumors

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Brain Tumors

A brain tumor is a growth of abnormal cells in the tissues of the brain. Brain tumors can be benign, with no cancer cells, or malignant, with cancer cells that grow quickly. Some are primary brain tumors, which start in the brain. Others are metastatic, and they start somewhere else in the body and move to the brain.

Brain tumors can cause many symptoms. Some of the most common are:

- Headaches, often in the morning
- Nausea and vomiting
- Changes in your ability to talk, hear, or see
- Problems with balance or walking
- Problems with thinking or memory
- Feeling weak or sleepy
- Changes in your mood or behavior
- Seizures

Doctors diagnose brain tumors by doing a neurologic exam and tests including an MRI, CT scan, and biopsy. Treatment options include watchful waiting, surgery, radiation therapy, chemotherapy, and targeted therapy. Targeted therapy uses drugs or other substances that attack cancer cells with less harm to normal cells. Many people get a combination of treatments.

NIH: National Cancer Institute

Start Here

- Adult Central Nervous System Tumors Treatment [<https://www.cancer.gov/types/brain/patient/adult-brain-treatment-pdq>]  (National Cancer Institute)
Also in Spanish [<https://www.cancer.gov/espanol/tipos/cerebro/paciente/tratamiento-cerebro-adultos-pdq>]
- Brain and Spinal Cord Tumors [<https://www.ninds.nih.gov/health-information/disorders/brain-and-spinal-cord-tumors>]  (National Institute of Neurological Disorders and Stroke)
- Brain and Spinal Cord Tumors in Adults [<https://www.cancer.org/cancer/types/brain-spinal-cord-tumors-adults.html>] (American Cancer Society)
- Brain Tumors Signs & Symptoms [<https://braintumor.org/brain-tumors/diagnosis-treatment/signs-symptoms/>] (National Brain Tumor Society)

Symptoms

- Signs and Symptoms (of a Brain Tumor) [<https://www.abta.org/about-brain-tumors/brain-tumor-diagnosis/brain-tumor-signs-symptoms/>] (American Brain Tumor Association)
- Spotlight on Brain Tumors: Do You Know the Symptoms? [<https://newsinhealth.nih.gov/2017/10/spotlight-brain-tumors>]  (National Institutes of Health)
Also in Spanish [<https://salud.nih.gov/recursos-de-salud/nih-noticias-de-salud/detectar-tumores-cerebrales>]

Diagnosis and Tests

- Brain MRI (Magnetic Resonance Imaging) [<https://www.radiologyinfo.org/en/info/mri-brain>]  (American College of Radiology; Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/es/info/mri-brain>]
- Can Brain and Spinal Cord Tumors in Adults Be Found Early? [<https://www.cancer.org/cancer/types/brain-spinal-cord-tumors-adults/detection-diagnosis-staging/detection.html>] (American Cancer Society)
Also in Spanish [<https://www.cancer.org/es/cancer/tipos/tumores-de-encefalo-o-de-medula-espinal/deteccion-diagnostico-clasificacion-por-etapas/deteccion.html>]
- Cerebrospinal Fluid (CSF) Analysis [<https://medlineplus.gov/lab-tests/cerebrospinal-fluid-csf-analysis/>]  (National Library of Medicine)
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/analisis-del-liquido-cefalorraquideo/>]
- Functional MRI (fMRI) [<https://www.radiologyinfo.org/en/info/fmribrain>]
(American College of Radiology; Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/es/info/fmribrain>]
- Head CT [<https://www.radiologyinfo.org/en/info/headct>]  (American College of Radiology; Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/es/info/headct>]
- Newly Diagnosed (Brain Tumor) [<https://www.abta.org/about-brain-tumors/newly-diagnosed/>]
(American Brain Tumor Association)

Prevention and Risk Factors

- Risk Factors for Brain and Spinal Cord Tumors [<https://www.cancer.org/cancer/types/brain-spinal-cord-tumors-adults/causes-risks-prevention/risk-factors.html>] (American Cancer Society)
Also in Spanish [<https://www.cancer.org/es/cancer/tipos/tumores-de-encefalo-o-de-medula-espinal/causas-riesgos-prevencion/factores-de-riesgo.html>]

Treatments and Therapies

- Assisted Care Options [<https://www.abta.org/about-brain-tumors/treatments-side-effects/assisted-care-options/>]
(American Brain Tumor Association)
- Drugs Approved for Brain Tumors [<https://www.cancer.gov/about-cancer/treatment/drugs/brain>]  (National Cancer Institute)
- End of Life Care (Brain Tumors) [<https://www.abta.org/about-brain-tumors/treatments-side-effects/end-of-life-care/>]
(American Brain Tumor Association)
- Steroids [<https://www.abta.org/wp-content/uploads/2018/03/steroids-brochure.pdf>] (American Brain Tumor Association) - PDF

Living With

- Brain Tumor Support Groups [<https://www.abta.org/supportgroups/>] (American Brain Tumor Association) - In English and Spanish

Related Issues

- Electromagnetic Fields and Cancer [<https://www.cancer.gov/about-cancer/causes-prevention/risk/radiation/electromagnetic-fields-fact-sheet>]  (National Cancer Institute)
Also in Spanish [<https://www.cancer.gov/espanol/cancer/causas-prevencion/riesgo/radiacion/hoja-informativa-campos-electromagneticos>]
- Recurrence (of Brain Tumors) [<https://www.abta.org/about-brain-tumors/recurrence/>] (American Brain Tumor Association)

Specifics

- Brain Tumor Types [<https://braintumor.org/brain-tumors/about-brain-tumors/brain-tumor-types/>] (National Brain Tumor Society)
- Brain Tumors Types [<https://www.abta.org/about-brain-tumors/brain-tumor-types/>] (American Brain Tumor Association) - PDF
- Meningioma [<https://www.mayoclinic.org/diseases-conditions/meningioma/symptoms-causes/syc-20355643?p=1>]
(Mayo Foundation for Medical Education and Research)

Genetics

- Constitutional mismatch repair deficiency syndrome: MedlinePlus Genetics
[<https://medlineplus.gov/genetics/condition/constitutional-mismatch-repair-deficiency-syndrome>]  (National Library of Medicine)
- Encephalocraniocutaneous lipomatosis: MedlinePlus Genetics
[<https://medlineplus.gov/genetics/condition/encephalocraniocutaneous-lipomatosis>]  (National Library of Medicine)

Images

- Craniotomy - series [https://medlineplus.gov/ency/presentations/100048_1.htm] (Medical Encyclopedia)
Also in Spanish [https://medlineplus.gov/spanish/ency/esp_presentations/100048_1.htm]

Videos and Tutorials

- Brain components [<https://medlineplus.gov/ency/anatomyvideos/000016.htm>]  (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/anatomyvideos/000016.htm>]

Statistics and Research

- Advances in Brain and Spinal Cord Tumor Research [<https://www.cancer.gov/types/brain/research>]  (National Cancer Institute)
- Cancer of the Brain and Other Nervous System [<https://seer.cancer.gov/statfacts/html/brain.html>]  (National Cancer Institute)
- Cell Phones and Cancer Risk [<https://www.cancer.gov/about-cancer/causes-prevention/risk/radiation/cell-phones-fact-sheet>]  (National Cancer Institute)
Also in Spanish [<https://www.cancer.gov/espanol/cancer/causas-prevencion/riesgo/radiacion/hoja-informativa-telefonos-celulares>]
- Liquid Biopsy Detects Brain Cancer and Early-Stage Kidney Cancer [<https://www.cancer.gov/news-events/cancer-currents-blog/2020/liquid-biopsy-kidney-brain-cancer>]  (National Cancer Institute)

Clinical Trials

- ClinicalTrials.gov: Brain Neoplasms [<https://clinicaltrials.gov/search?cond=%22Brain+Neoplasms%22&aggFilters=status:not%20rec>]  (National Institutes of Health)
- ClinicalTrials.gov: Glioma [<https://clinicaltrials.gov/search?cond=%22Glioma%22&aggFilters=status:not%20rec>]  (National Institutes of Health)
- ClinicalTrials.gov: Meningioma [<https://clinicaltrials.gov/search?cond=%22Meningioma%22&aggFilters=status:not%20rec>]  (National Institutes of Health)

Journal Articles

References and abstracts from MEDLINE/PubMed (National Library of Medicine)

- Article: Distress screening in patients with high-grade glioma: diagnostic accuracy in relation... [<https://www.ncbi.nlm.nih.gov/pubmed/40745114>]
- Article: Modified Target Delineation and Moderately Hypofractionated Radiotherapy for High-Grade Glioma: A... [<https://www.ncbi.nlm.nih.gov/pubmed/40705330>]
- Article: Platinum plus etoposide with durvalumab for extensive-stage small-cell lung cancer with... [<https://www.ncbi.nlm.nih.gov/pubmed/40614659>]
- Brain Tumors -- see more articles [<https://pubmed.ncbi.nlm.nih.gov/?term=%22Brain+Neoplasms%22%5Bmajr%3Anoexp%5D+AND+humans%5Bmh%5D+AND+english%5Bla%5D+AND+%22last+1+Year%22+%5Bedat%5D+AND+%28patient+education+handout%5Bpt%5D+OR+guideline%5Bpt%5D+OR+clinical+trial%5Bpt%5D%29++NOT+%28letter%5Bpt%5D+OR+case+reports%5Bpt%5D+OR+editorial%5Bpt%5D+OR+comment%5Bpt%5D%29+AND+free+full+text%5Bsb%5D+>]

Reference Desk

- Dictionary of Cancer Terms [<https://www.cancer.gov/publications/dictionaries/cancer-terms>]  (National Cancer Institute)
Also in Spanish [<https://www.cancer.gov/espanol/publicaciones/diccionarios/diccionario-cancer/>]

Find an Expert

- American Cancer Society [<https://www.cancer.org/>]
- Choosing a Cancer Doctor [<https://www.cancer.org/cancer/managing-cancer/finding-care/where-to-find-cancer-care/choosing-a-cancer-doctor.html>] (American Cancer Society)
Also in Spanish [<https://www.cancer.org/es/cancer/como-sobrellevar-el-cancer/encontrar-tratamiento/como-elegir-un-medico-y-un-hospital/como-seleccionar-a-un-medico.html>]
- National Cancer Institute [<https://www.cancer.gov/>] 
Also in Spanish [<https://www.cancer.gov/espanol>]
- NCI - Designated Cancer Centers [<https://www.cancer.gov/research/infrastructure/cancer-centers>]
 (National Cancer Institute)
Also in Spanish [<https://www.cancer.gov/espanol/investigacion/infraestructura/centros-oncologicos>]
- Neuro-Oncology Branch [<https://ccr.cancer.gov/neuro-oncology-branch>]
 (National Cancer Institute; National Institute of Neurological Disorders and Stroke)
- Organizations that Offer Cancer Support Services [<https://supportorgs.cancer.gov/home.aspx>] 
(National Cancer Institute)
Also in Spanish [<https://supportorgs.cancer.gov/home.aspx?lang=2>]

Children

- Childhood Brain Tumors: MedlinePlus Health Topic [<https://medlineplus.gov/childhoodbraintumors.html>]
 (National Library of Medicine)
Also in Spanish [<https://medlineplus.gov/spanish/childhoodbraintumors.html>]

Patient Handouts

- Brain surgery [<https://medlineplus.gov/ency/article/003018.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003018.htm>]
- Brain surgery - discharge [<https://medlineplus.gov/ency/patientinstructions/000124.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000124.htm>]
- Brain tumor - primary -- adults [<https://medlineplus.gov/ency/article/007222.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/007222.htm>]
- Metastatic brain tumor [<https://medlineplus.gov/ency/article/000769.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/000769.htm>]



After chemotherapy - discharge [<https://medlineplus.gov/ency/patientinstructions/000012.htm>]
Brain components [<https://medlineplus.gov/ency/anatomyvideos/000016.htm>]
Brain herniation [<https://medlineplus.gov/ency/article/001421.htm>]
Brain PET scan [<https://medlineplus.gov/ency/article/007341.htm>]
Brain radiation - discharge [<https://medlineplus.gov/ency/patientinstructions/000055.htm>]
Brain surgery [<https://medlineplus.gov/ency/article/003018.htm>]
Brain surgery - discharge [<https://medlineplus.gov/ency/patientinstructions/000124.htm>]
Brain tumor - primary -- adults [<https://medlineplus.gov/ency/article/007222.htm>]
Cerebral spinal fluid (CSF) collection [<https://medlineplus.gov/ency/article/003428.htm>]
Craniotomy - series [https://medlineplus.gov/ency/presentations/100048_1.htm]
Head CT scan [<https://medlineplus.gov/ency/article/003786.htm>]
Head MRI [<https://medlineplus.gov/ency/article/003791.htm>]
Hypothalamic tumor [<https://medlineplus.gov/ency/article/001211.htm>]
Metastatic brain tumor [<https://medlineplus.gov/ency/article/000769.htm>]
Posterior fossa tumor [<https://medlineplus.gov/ency/article/001404.htm>]
Primary lymphoma of the brain [<https://medlineplus.gov/ency/article/000734.htm>]
Skull x-ray [<https://medlineplus.gov/ency/article/003802.htm>]
Stereotactic radiosurgery - discharge [<https://medlineplus.gov/ency/patientinstructions/000131.htm>]
Stereotactic radiosurgery - Gamma Knife [<https://medlineplus.gov/ency/article/007577.htm>]

Related Health Topics

Brain Diseases [<https://medlineplus.gov/braindiseases.html>]
Childhood Brain Tumors [<https://medlineplus.gov/childhoodbraintumors.html>]
Pituitary Tumors [<https://medlineplus.gov/pituitarytumors.html>]

National Institutes of Health

The primary NIH organization for research on *Brain Tumors* is the National Cancer Institute [<http://www.cancer.gov/>]

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