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Nuclear Scans

Also called: Radioisotope scans, Radionuclide scans

Nuclear scans use radioactive substances to see structures and functions inside your body. They use a special camera that detects radioactivity.

Before the test, you receive a small amount of radioactive material. You may get it as an injection. Sometimes you swallow it or inhale it. Then you lie still on a table while the camera makes images. Most scans take 20 to 45 minutes.

Nuclear scans can help doctors diagnose many conditions, including cancers, injuries, and infections. They can also show how organs like your heart and lungs are working.

Start Here

- General Nuclear Medicine [<https://www.radiologyinfo.org/en/info/gennuclear>]
(American College of Radiology; Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/es/info/gennuclear>]
- Nuclear Medicine [<https://www.nibib.nih.gov/science-education/science-topics/nuclear-medicine>]
 (National Institute of Biomedical Imaging and Bioengineering)
Also in Spanish [<https://www.nibib.nih.gov/espanol/temas-cientificos/medicina-nuclear>]
- Nuclear Medicine Imaging [https://www.asrt.org/docs/default-source/patientpages/asrt2011_nucmed.pdf]
(American Society of Radiologic Technologists) - **PDF - In English and Spanish**

Prevention and Risk Factors



- Radiation Exposure from Medical Exams and Procedures [https://hps.org/wp-content/uploads/2024/12/Medical_Exposures_Fact_Sheet.pdf] (Health Physics Society) - **PDF**

Specifics

- Heart Tests [<https://www.nhlbi.nih.gov/health/heart-tests>]  (National Heart, Lung, and Blood Institute)
Also in Spanish [<https://www.nhlbi.nih.gov/es/salud/estudios-cardiacos>]
- Hepatobiliary Nuclear Medicine [<https://www.radiologyinfo.org/en/info/hepatobiliary>]
(American College of Radiology; Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/es/info/hepatobiliary>]
- Lymphoscintigraphy [<https://www.radiologyinfo.org/en/info/lympho>]
(American College of Radiology; Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/es/info/lympho>]
- PET Scan [<https://medlineplus.gov/lab-tests/pet-scan/>]  (National Library of Medicine)
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/tomografia-por-emision-de-positrones/>]
- Renal (Kidney) Scintigraphy [<https://www.radiologyinfo.org/en/info/Renal>]
(American College of Radiology; Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/es/info/Renal>]

Skeletal Scintigraphy (Bone Scan) [<https://www.radiologyinfo.org/en/info/bone-scan>]



(American College of Radiology; Radiological Society of North America)

- **SPECT (Single-Photon Emission Computerized Tomography) Scan** [<https://www.mayoclinic.org/tests-procedures/spect-scan/about/pac-20384925?p=1>] (Mayo Foundation for Medical Education and Research)
Also in Spanish [<https://www.mayoclinic.org/es/tests-procedures/spect-scan/about/pac-20384925?p=1>]
- **Stress Tests** [<https://medlineplus.gov/lab-tests/stress-tests/>]  (National Library of Medicine)
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/pruebas-de-esfuerzo/>]
- **Thyroid Scan and Uptake** [<https://www.radiologyinfo.org/en/info/thyroiduptake>]
 (American College of Radiology; Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/es/info/thyroiduptake>]

Videos and Tutorials

- **Your Radiologist Explains Nuclear Medicine** [<https://www.radiologyinfo.org/en/gallery/video/977>]
 (American College of Radiology; Radiological Society of North America)

Clinical Trials

- **ClinicalTrials.gov: Radionuclide Imaging** [<https://clinicaltrials.gov/search?intr=%22Radionuclide+Imaging%22&aggFilters=status:not%20rec>]  (National Institutes of Health)
- **ClinicalTrials.gov: Tomography, Emission-Computed** [<https://clinicaltrials.gov/search?intr=%22Tomography,+Emission-Computed%22&aggFilters=status:not%20rec>]  (National Institutes of Health)

Journal Articles

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

- **Article: Impact of Field-of-view Zooming and Segmentation Batches on Radiomics Features Reproducibility...** [<https://www.ncbi.nlm.nih.gov/pubmed/40524366>]
- **Article: Machine learning based differential diagnosis of SAPHO syndrome and secondary bone...** [<https://www.ncbi.nlm.nih.gov/pubmed/40437231>]
- **Article: Scintigraphy for the diagnosis of primary unrecognised fractures in multiple trauma...** [<https://www.ncbi.nlm.nih.gov/pubmed/40353853>]
- **Nuclear Scans -- see more articles** [<https://pubmed.ncbi.nlm.nih.gov/?term=%22Radionuclide+Imaging%22%5Bmajr%3Anoexp%5D+AND+humans%5Bmh%5D+AND+english%5Bla%5D+AND+%22last+1+Year%22+%5Bedat%5D+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

- **RadiologyInfo: Glossary of Terms** [<https://www.radiologyinfo.org/en/glossary-index>]
(American College of Radiology; Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/es/glossary-index>]

Find an Expert

- **Food and Drug Administration** [<https://www.fda.gov/>]
- **RadiologyInfo** [<https://www.radiologyinfo.org/>] (American College of Radiology; Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/es/>]

Children

- **Pediatric Nuclear Medicine** [<https://www.radiologyinfo.org/en/info/nuclear-pdi>]
 (American College of Radiology; Radiological Society of North America)

Women

- Radiation Exposure and Pregnancy [https://hps.org/wp-content/uploads/2024/12/pregnancy_fact_sheet.pdf] (Health Physics Society) - **PDF**

Patient Handouts

- Bone scan [<https://medlineplus.gov/ency/article/003833.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003833.htm>]
- Brain PET scan [<https://medlineplus.gov/ency/article/007341.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/007341.htm>]
- Gallbladder radionuclide scan [<https://medlineplus.gov/ency/article/003826.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003826.htm>]
- Heart PET scan [<https://medlineplus.gov/ency/article/007343.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/007343.htm>]
- Nuclear ventriculography [<https://medlineplus.gov/ency/article/003822.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003822.htm>]
- Pulmonary ventilation/perfusion scan [<https://medlineplus.gov/ency/article/003828.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003828.htm>]
- Thyroid scan [<https://medlineplus.gov/ency/article/003829.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003829.htm>]



MEDICAL ENCYCLOPEDIA

- Bone scan [<https://medlineplus.gov/ency/article/003833.htm>]
- Brain PET scan [<https://medlineplus.gov/ency/article/007341.htm>]
- Gallbladder radionuclide scan [<https://medlineplus.gov/ency/article/003826.htm>]
- Gallium scan [<https://medlineplus.gov/ency/article/003450.htm>]
- Heart PET scan [<https://medlineplus.gov/ency/article/007343.htm>]
- Liver scan [<https://medlineplus.gov/ency/article/003825.htm>]
- Lung gallium scan [<https://medlineplus.gov/ency/article/003824.htm>]
- MIBG scintiscan [<https://medlineplus.gov/ency/article/003830.htm>]
- Nuclear stress test [<https://medlineplus.gov/ency/article/007201.htm>]
- Nuclear ventriculography [<https://medlineplus.gov/ency/article/003822.htm>]
- PET scan [<https://medlineplus.gov/ency/article/003827.htm>]

PET scan for breast cancer [<https://medlineplus.gov/ency/article/007469.htm>]

Pulmonary ventilation/perfusion scan [<https://medlineplus.gov/ency/article/003828.htm>]

Radionuclide cisternogram [<https://medlineplus.gov/ency/article/003823.htm>]

Radionuclide cystogram [<https://medlineplus.gov/ency/article/003832.htm>]

RBC nuclear scan [<https://medlineplus.gov/ency/article/003835.htm>]

Renal perfusion scintiscan [<https://medlineplus.gov/ency/article/003831.htm>]

Thyroid scan [<https://medlineplus.gov/ency/article/003829.htm>]

Related Health Topics

Diagnostic Imaging [<https://medlineplus.gov/diagnosticimaging.html>]

Other Languages

Find health information in languages other than English [<https://medlineplus.gov/languages/nuclearscans.html>] on *Nuclear Scans*

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