

## WIKIPEDIA

# Iohexol

**Iohexol**, sold under the trade name **Omnipaque** among others, is a contrast agent used for X-ray imaging.<sup>[1]</sup> This includes when visualizing arteries, veins, ventricles of the brain, the urinary system, and joints, as well as during computed tomography (CT scan).<sup>[1]</sup> It is given by mouth, injection into a vein, or into a body cavity.<sup>[2]</sup>

Side effects include vomiting, skin flushing, headache, itchiness, kidney problems, and low blood pressure.<sup>[1]</sup> Less commonly allergic reactions or seizures may occur.<sup>[1]</sup> Allergies to povidone-iodine or shellfish do not affect the risk of side effects more than other allergies.<sup>[3]</sup> Use in the later part of pregnancy may cause hypothyroidism in the baby.<sup>[4]</sup> Iohexol is an iodinated non-ionic radiocontrast agent.<sup>[1]</sup> It is in the low osmolar family.<sup>[5]</sup>

Iohexol was approved for medical use in 1985.<sup>[6]</sup> It is on the World Health Organization's List of Essential Medicines.<sup>[7][2]</sup>

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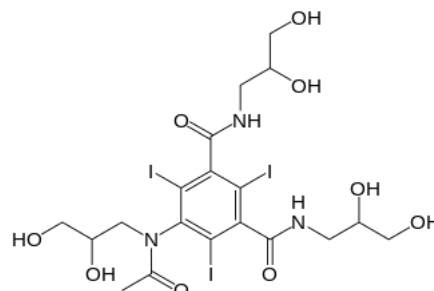
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## Chemistry

The osmolality of iohexol ranges from 322 mOsm/kg—approximately 1.1 times that of blood plasma—to 844 mOsm/kg, almost three times that of blood.<sup>[8]</sup> Despite this difference, iohexol is

### Iohexol



### Clinical data

<b>Trade names</b>	Omnipaque, Hexopaque, Oraltag, others
<b>Other names</b>	5-[N-(2,3-Dihydroxypropyl)acetamido]-2,4,6-triiodo-N,N'-bis(2,3-dihydroxypropyl)isophthalamide
<b>AHFS/Drugs.com</b>	Micromedex Detailed Consumer Information ( <a href="https://www.drugs.com/cons/iohexol.html">https://www.drugs.com/cons/iohexol.html</a> )
<b>License data</b>	<span><span><span></span></span><span> </span></span> US <span><span><span></span></span><span> </span></span> DailyMed: Iohexol ( <a href="https://dailymed.nlm.nih.gov/dailymed/search.cfm?labeltype=all&amp;query=iohexol">https://dailymed.nlm.nih.gov/dailymed/search.cfm?labeltype=all&amp;query=iohexol</a> )
<b>Routes of administration</b>	intrathecal, intravascular, by mouth, intracavitary, rectal
<b>ATC code</b>	V08AB02 (WHO ( <a href="https://www.who.cc.no/atc_ddd_index/?code=V08AB02">https://www.who.cc.no/atc_ddd_index/?code=V08AB02</a> ))
<b>Legal status</b>	
<b>Legal status</b>	<span><span><span></span></span><span> </span></span> US: R-only <p>In general: R (Prescription only)</p>
<b>Pharmacokinetic data</b>	
<b>Protein binding</b>	Low
<b>Metabolism</b>	Nil
<b>Elimination half-life</b>	Variable
<b>Excretion</b>	Kidney, unchanged

still considered a low-osmolality contrast agent; the osmolality of older agents, such as diatrizoate, may be more than twice as high.<sup>[9]</sup>

## Society and culture

### Names

It is sold under the brand names Omnipaque,<sup>[10]</sup> Optiscan, and Hexopaque. It is also sold as a density gradient medium under the names Accudenz, Histodenz, and Nycodenz.<sup>[11][12]</sup>

### Formulations

It is available in various concentrations, from 140 to 350<sup>[13]</sup> milligrams of iodine per milliliter.

## References

- ↑ World Health Organization (2009). Stuart MC, Kouimtzi M, Hill SR (eds.). *WHO Model Formulary 2008*. World Health Organization. pp. 317–8. hdl:10665/44053 (https://hdl.handle.net/10665%2F44053). ISBN 9789241547659.
- ↑ Hamilton, Richart (2015). *Tarascon Pocket Pharmacopoeia 2015 Deluxe Lab-Coat Edition*. Jones & Bartlett Learning. p. 171. ISBN 9781284057560.
- ↑ *ACR Manual on Contrast Media v10.3. 2017* (https://www.acr.org/-/media/ACR/Files/Clinical-Resources/Contrast\_Media.pdf) (PDF). American College of Radiology. 2017. p. 6. ISBN 9781559030120. Archived (https://web.archive.org/web/20180101145210/https://www.acr.org/-/media/ACR/Files/Clinical-Resources/Contrast\_Media.pdf) (PDF) from the original on 1 January 2018. Retrieved 1 January 2018.

Identifiers	
<b>IUPAC name</b>	1- <i>N</i> ,3- <i>N</i> -Bis(2,3-dihydroxypropyl)-5-[ <i>N</i> -(2,3-dihydroxypropyl)acetamido]-2,4,6-triiodobenzene-1,3-dicarboxamide
<b>CAS Number</b>	66108-95-0 (https://commonchemistry.cas.org/detail?cas_rn=66108-95-0) ✓
<b>PubChem CID</b>	3730 (https://pubchem.ncbi.nlm.nih.gov/compound/3730)
<b>DrugBank</b>	DB01362 (https://www.drugbank.ca/drugs/DB01362) ✓
<b>ChemSpider</b>	3599 (https://www.chemspider.com/Chemical-Structure.3599.html) ✓
<b>UNII</b>	4419T9MX03 (https://precision.fda.gov/uniisearch/srs/unii/4419T9MX03)
<b>KEGG</b>	D01817 (https://www.kegg.jp/entry/D01817) ✓
<b>ChEBI</b>	CHEBI:31709 (https://www.ebi.ac.uk/chebi/searchId.do?chebiId=CHEBI:31709) ✓
<b>ChEMBL</b>	ChEMBL1200455 (https://www.ebi.ac.uk/chembl/db/index.php/compound/inspect/ChEMBL1200455) ✗
<b>CompTox Dashboard</b> (EPA)	DTXSID6023157 (https://comptox.epa.gov/dashboard/chemical/details/DTXSID6023157)
<b>ECHA InfoCard</b>	100.060.130 (https://echa.europa.eu/substance-information/-/substanceinfo/100.060.130)
Chemical and physical data	
<b>Formula</b>	C <sub>19</sub> H <sub>26</sub> I <sub>3</sub> N <sub>3</sub> O <sub>9</sub>
<b>Molar mass</b>	821.142 g·mol <sup>−1</sup>
<b>3D model (JSmol)</b>	Interactive image (https://chemapps.stolaf.edu/jmol/jmol.php?model=O%3DC%28N%28c1c%28I%29c%28c%28I%29c%28c1%29C%28%3DO%29NCC%28O%29CO%



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## External links

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- "Iohexol" (<https://druginfo.nlm.nih.gov/drugportal/name/iohexol>). *Drug Information Portal*. U.S. National Library of Medicine.
  - "Iohexol Injection, Oral, Rectal Advanced Patient Information" (<https://www.drugs.com/cons/iohexol-injection-oral-rectal.html>). *Drugs.com*. 13 January 2019. Retrieved 3 February 2020.
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