

Endothelium derived relaxing factor

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For the chemical compound nitric oxide (nitrogen monoxide, NO), see [nitric oxide](#).

Endothelium-derived relaxing factor (EDRF) was the tentative name of what was later discovered to be [nitric oxide \(NO\)](#). It is released by the vascular [endothelium](#) in response to a variety of chemical and physical stimuli. It causes the [smooth muscle](#) in the vessel wall to relax by activating the soluble guanylate cyclases (sGC), increasing the [cyclic guanosine monophosphate \(cGMP\)](#) concentration and activating the [protein kinase G](#), resulting in [vasodilation](#). It is also the active substance absorbed into the blood stream by people using [nitroglycerin](#) tablets or spray under their tongue, by patch, pill or intravenous infusion of nitroglycerin.

Endothelium also produces [prostacyclin \(PGI2\)](#), [Endothelium-derived hyperpolarizing factor](#), and [Heme oxygenase](#) which produces [Carbon monoxide](#). These are distinct from EDRF by a number of physicochemical and pharmacological criteria.

EDRF was discovered and characterized by [Robert F. Furchgott](#), a winner of the [Nobel Prize in Medicine](#) in [1998](#) with his co-researchers [Louis J. Ignarro](#) and [Ferid Murad](#).