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MADISON NEUROLOGY LLC

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Neurology Care 7 days a Week. Because Your Brain Matters.

Brain Arteriovenous Malformation (AVM)

Patient education guide · Stroke & Vascular · Madison Neurology LLC

What is it?

A brain arteriovenous malformation is a tangle of abnormal blood vessels that connects arteries directly to veins, bypassing the normal capillary bed. AVMs are usually present from birth but often discovered in young to middle-aged adults, either after a bleed or incidentally on imaging.

How does it happen?

AVMs arise from abnormal blood vessel development before birth; they are not caused by anything a person does and are usually not inherited. Rare genetic syndromes (such as hereditary hemorrhagic telangiectasia) can be associated with multiple AVMs.

Common symptoms

- Often none until rupture
- Bleeding into the brain (hemorrhage) — the most serious first sign
- Seizures
- Headache, sometimes one-sided or migraine-like
- Progressive weakness, numbness, or other neurological symptoms (less common)

How is it diagnosed?

MRI and MR angiography usually reveal the AVM. Catheter cerebral angiography maps the feeding arteries and draining veins in detail and is essential for treatment planning.

How is it treated?

Options include observation with periodic imaging, microsurgical removal, endovascular embolization (injecting material to block vessels), and stereotactic radiosurgery (focused radiation that closes the AVM over 1-3 years). The choice depends on size, location, drainage pattern, and whether it has bled.

Some AVMs are best left alone and monitored.

What does the future hold?

Unruptured AVMs carry an average bleeding risk of roughly 2-4% per year; risk is higher after a first bleed. Complete removal or closure essentially eliminates that risk. Many people with unruptured AVMs live normal lives under surveillance; seizures, when present, are usually well controlled with medication.

Questions patients commonly ask

Q: My AVM has never bled — should it be treated?

A: It depends on its features and your age and health; some are treated, others are watched. This decision is best made at a center with AVM expertise.

Q: Can an AVM come back after treatment?

A: After confirmed complete removal or closure, recurrence is rare, but follow-up imaging is done to confirm durability.

Q: Is it safe to become pregnant with an AVM?

A: Pregnancy may modestly increase bleeding risk; discuss timing of treatment and pregnancy plans with your specialist.

National support groups & resources

- **American Stroke Association** — stroke.org — 1-888-478-7653
- **American Academy of Neurology — Brain & Life patient resources** — brainandlife.org
- **National Organization for Rare Disorders** — rarediseases.org — 1-800-999-6673

(Organization contact details were current at the time of compilation; please verify online.)

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