

# Upcoming Webinar



## Understanding the Link Between the Arteriovenous Access, Cardiac Function and Effects of Hemodialysis

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*Presented by:*

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**SUMMARY:** Obtaining an arteriovenous (AV) access for initiation of hemodialysis is considered the gold standard as it reduces risks of infections, hospitalizations, and need for interventions. It is well documented that creation of AV access can cause or aggravate heart failure. Once AV access is created, blood volume, cardiac contractility, and left ventricular end-diastolic volume increase in a nonphysiologic fashion resulting in an overall increase in cardiac output. Left ventricular hypertrophy, diastolic dysfunction, pulmonary hypertension, and high-output cardiac failure can occur. AV accesses that have blood flows greater than 1.5 L per minute are of high risk. When access flow exceeds 25% to 30% of cardiac output, the risk of developing high-output heart failure increases. Studies suggest that a blood flow (Qa)/cardiac output (CO) ratio of greater than 0.30 should be used as a screening tool to perform further cardiac testing. Depending on the severity of symptoms, management can range from banding procedure (flow reduction) or need for total abandonment of the AV access. The complications associated with high-flow AV accesses are often overlooked. Nephrologists and vascular access experts should work in tandem to mitigate potential harm to patients on dialysis who are afflicted by this condition.

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