A. Medical Knowledge

**Goal:** The resident will achieve a detailed knowledge of vascular disease and will develop the skills needed to treat the vascular surgery patient.

**Objectives: The Resident should be able to…**

1. Discuss the etiology, evaluation, and management of lower extremity diabetic foot disease, chronic venous insufficiency, deep venous thrombosis, and lymphedema.
2. Describe the diagnosis and management of vascular surgery complications.
3. Discuss the diagnosis and management of vascular trauma.
4. Recite the various invasive and non-invasive techniques used to diagnose vascular disease, including:
   a. hemodynamic assessment
   b. duplex evaluation
   c. arteriography
   d. CT
   e. MRI/MRA/MRV
   f. pulse volume recordings
   g. transcutaneous oxygen
5. Discuss the diagnosis and management of coagulation disorders, including:
   a. bleeding disorders
   b. heparin associated thrombocytopenia
   c. hypercoagulable states
6. Discuss the indications and use of common medications utilized in vascular surgery, including:
   a. low molecular weight heparin
   b. antiplatelet agents
   c. anti thrombolytic therapy
7. Recite the indications for thrombolysis, surgical endarterectomy, vascular bypass, or endovascular repair of vascular lesions.
8. Discuss the etiology, evaluation, and management of aneurysmal disease.
9. Discuss the etiology, evaluation, and management of arterial and venous occlusive disease, including:
   a. extremity
   b. carotid
   c. visceral
   d. renal
10. Discuss the etiology, evaluation, and management of renal artery occlusive disease.
11. Discuss the etiology, evaluation, and management of embolic and stenotic arterial disease.
12. Discuss the etiology, evaluation, and management of Thoracic outlet syndrome, innominate, subclavian arterial disease.

13. Discuss the pathophysiology and management of non-atherosclerotic vascular diseases, including
   a. systemic vasculitides
   b. giant cell arteritis
   c. Takayasu’s disease
   d. radiation induced arterial disease
   e. arterial infections
   f. adventitial cystic disease
   g. Buerger’s Disease
   h. Marfan’s syndrome
   i. Ehler-Danlos syndrome
   j. homocystinuria

14. Draw the appropriate surgical incisions and techniques for vascular exposure.

B. Patient Care

Goal: The resident will provide patient care that is compassionate, appropriate, and effective for the treatment of vascular surgery problems.

Objectives: The Resident should be able to…
1. Participates, with graduated surgical independence, in simple and associated vascular surgical procedures, including:
   a. Amputations
   b. closure of surgical wounds and incisions
2. Participates in the pre and postoperative care of the vascular surgery patient.
3. Care for patients who are post amputation, and treat phantom pain syndromes.
4. Evaluate and diagnose patients with vascular surgery diagnoses.
5. Develop a working knowledge of and interpret vascular lab studies and imaging studies.
6. Participates, with graduated surgical independence, in simple and associated vascular surgical procedures, including:
   a. Amputations
   b. vascular access procedures
   c. vascular shunts
   d. closure of surgical wounds and incisions
7. Participates, with graduated surgical independence, in vascular bypass surgeries, including:
   a. femoral-popliteal bypass
   b. femoral-femoral bypass
   c. femoral-tibial bypass
   d. aorto-femoral bypass
8. Participate, with graduated surgical independence, in major vascular surgery, including:
   a. carotid endarterectomies
b. abdominal aortic aneurysms

c. endovascular procedures

d. aneurysmal disease procedures

e. central and extremity arterial occlusive disease

f. renal artery occlusive disease

g. visceral ischemia

9. Learn the commonly performed techniques for arterial and venous anastomoses.

C. Practice Based Learning and Improvement

**Goal:** The resident will investigate and evaluate his or her own patient care practices, appraise and assimilate scientific evidence, and improve patient care practices.

**Objectives: The Resident should be able to…**

1. Uses information technology to prepare for surgical cases, bringing to the OR the knowledge of current modalities of care and the scientific evidence for that care.
2. Routinely analyzes the effectiveness of own practices in caring for vascular surgery patients.
3. Improves own practices in the care of vascular surgery patients by integrating appropriately gathered data and feedback.
4. Educates medical students and other healthcare professionals in the practices of vascular surgery.
5. Functions independently with graduated advancement and appropriate faculty
6. Uses library sources to perform research and perform literature searches.
7. Understands the principles of clinical research and the application of biostatistics.

D. Interpersonal and Communication Skills

**Goal:** The resident will demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and professional associates.

**Objectives: The Resident should be able to…**

1. Educates patients and families in post operative and rehabilitative strategies for vascular surgery patients.
2. Demonstrates compassion for patients and families afflicted by vascular disease.
3. Provides adequate counseling and informed consent to patients.
4. Listens to patients and their families.
5. Assimilates data and information provided by other members of the health care team.
6. Charts and records accurate information.

E. System Based Practice

Goal: The resident will demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.

Objectives: The Resident should be able to…

1. Coordinates all aspects of the rehabilitation of the vascular surgery patient.
2. Direct the rehabilitation of patients following vascular surgery by partnering with the following:
   a. Physical Therapy
   b. Occupational Therapy
   c. PRM physicians
   d. social workers
   e. nutritionalists
3. Demonstrates knowledge of cost-effective vascular surgery care.
4. Advocates for patients within the health care system.
5. Refers patients to the appropriate practitioners and agencies.
6. Facilitates the timely discharge and/or placement of vascular surgery patients

F. Professionalism

Goal: The resident will demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

Objectives: The Resident should be able to…

1. Develops a sensitivity of the unique stresses placed on families under care for vascular surgery.
2. Exhibits an unselfish regard for the welfare of surgery patients.
3. Demonstrates firm adherence to a code of moral and ethical values.
4. Is respectful to hand patients and their families especially in times of trauma and stress to the family unit.
5. Respects and appropriately integrates other members of the vascular surgery team.
6. Provides appropriately prompt hand consultations when requested.
7. Demonstrates sensitivity to the individual patient’s profession, life goals, and cultural background as they apply to vascular surgery.
8. Is reliable, punctual, and accountable for own actions in the OR and clinic.
9. Understands the concepts of autonomy, beneficence, nonmaleficence, justice, and respect for life.
10. Maintains patient confidentiality.

Vascular Surgery Reference: