

# Discharge Education for Secondary Stroke Prevention of Acute Ischemic Stroke (ASI)

**Author: Debbie Summers, MSN RN ACNS-BC SCRN CNRN FAHA**

**Project Leads: Jennifer Coffman, DNP APRN CPNP-AC CNRN; Lorin Daniels, BSN RN CNRN**

## DISEASE OVERVIEW

Approximately 795,000 individuals in the U.S. experience a stroke, of which 87% (690,000) are ischemic and 185,000 are recurrent. The risk of recurrent stroke is high, but up to 90% of strokes may be preventable by addressing vascular risk factors, including BP control, diet, physical activity, and smoking cessation.

## NEURO PEARLS ON STROKE WARNINGS

F = Face drooping: Ask the person to smile. Does one side droop?

A = Arm weakness: Ask the person to raise both arms. Does one arm drift downward?

S = Speech difficulty: Ask the person to repeat a simple sentence. Are the words slurred?

T = Time to call 9-1-1 immediately.

## RISK FACTOR MANAGEMENT – KNOW YOUR NUMBERS!

### Blood Pressure Management

Treatment of hypertension is possibly the most important intervention for secondary prevention of ischemic stroke. Blood pressure goal of <130/80 mm Hg for most patients.

### Diabetes Management – (DM)

DM is an independent risk factor for stroke recurrence. New cases of Type 2 DM have been detected in about 11.5% of patients presenting with AIS and prediabetes in 36.2%. For most patients, achieving a goal of hemoglobin A1c  $\leq 7\%$  is recommended.

### Noncardioembolic

Antiplatelet therapy is recommended, guidelines recommend aspirin 50- 325mg daily, or clopidogrel 75mg, or the combination of aspirin 25mg and extended-release dipyridamole 200mg twice daily. Dual antiplatelet therapy is only recommended short-term and in very specific patients.

### Cardioembolic - Atrial fibrillation

AF is a powerful risk factor for AIS, increasing the risk 4- to 5-fold. In patients with non-valvular AF or atrial flutter and, oral anticoagulation is recommended.

### Abnormal Lipids

Patients with AIS and no known coronary heart disease, no major cardiac sources of embolism, and LDL-C >100 mg/dL, should be treated with atorvastatin 80 mg daily to reduce risk of stroke recurrence. Patients with atherosclerotic disease should be treated with a statin and ezetimibe, if needed, to a goal LDL-C of < 70 mg/dL

### Lifestyle changes

#### 1. Nutrition

It is reasonable to recommend that patients follow a diet emphasizing vegetables, fruits, whole grains, low-fat dairy products, fish, legumes and nuts, and limits sodium, sweets, and red meats.

#### 2. Activity

Patients who are able should engage in at least moderate-intensity aerobic activity for a minimum of 10 minutes 4 times a week or vigorous-intensity aerobic activity for a minimum of 20 minutes twice a week. For patients with deficits that impair their ability to exercise, a supervised exercise program can be beneficial.

### 3. Smoking

Smoking approximately doubles the risk of stroke. Counseling with or without drug therapy should be recommended to help patients quit smoking.

### 4. Alcohol Intake

Patients who are heavy drinkers should be counseled to eliminate or reduce their consumption of alcohol. Light to moderate amounts of alcohol consumption (up to 2 drinks per day for men and up to 1 drink per day for nonpregnant women).

### Obstructive Sleep Apnea (OSA)

If high index of OSA, schedule outpatient sleep apnea test and if known OSA recommend treatment with CPAP which can be beneficial to BP, sleepiness, and impacts stroke related outcome and recovery of stroke.

## RISK FACTOR EDUCATION AND STROKE RECOVERY

Effective patient and family education begins with understanding individual's health literacy.

### 1. Top education needs identified by stroke survivors were:

Information and education of stroke signs and symptoms; how to prevent another stroke; what caused my stroke; understanding discharge medication, stroke rehabilitation/recovery and when can I return to work.

### 2. Risk Factor Education:

#### BP Management

- High BP causes blood to push against the vessels and causes damage to the vessel that can cause clots to form.
- Take your BP daily and never stop unless talk to your provider.
- BP medication can cause headaches, dizziness or decrease in heart rate. Always notify provider do not stop.
- Educate on the class of medication being used to manage BP. Numerous medication are used to treat BP, discuss with pharmacist to help with education.

### Diabetes Management

- Elevated sugar can result in increased fatty deposits or clots in blood vessels. These clots can narrow or block blood flow in the brain or neck decreasing blood supply to brain.
- Maintain health weight.
- Exercise.

### Antiplatelet or Anticoagulant Management

- Medication used to reduce the blood clotting in an artery that can lead to blocking flow of blood to brain.
- Some medications require blood monitoring, never skip monitoring.
- Taking supplements or over the counter and affect the way the drug works, either strengthen or weakening them.
- Watch for bleeding in urine, stool or of gums, notify provider.

*Life Style Changes* – see recommendation under each section under risk factor management.

*Obstructive Sleep Apnea* – untreated OSA leads to high BP, increasing risk of atrial fib due to atrial enlargement and these factors increase risk of stroke.

### 3. Ongoing Education:

Begin education early in the patient's hospital stay and reinforce your teaching on a regular basis. Be sure to provide written materials, as stroke survivors and their families. Use evidence-based methods, such a "teach-back" and health coaching which was effective in reducing unplanned 30-day readmissions.

### 4. Post-discharge follow-up:

By telephone or in person to identify concerns about medications and to ensure all prescriptions have been filled can boost adherence.

### 5. Communication across each setting:

Facilitate stroke education communication across each setting between designated sending and receiving providers during every transition to ensure accurate representation of the patient's key clinical and psychosocial issues across the care trajectory.