Ameika Connor, MSN, FNP-BC

THE IMPORTANCE OF SMOKING CESSION IN SURGICAL WOUND HEALING

Abstract
Cigarette smoking causes close to 500,000 deaths each year in the United States. It is the cause of 90% of all lung cancers and increases risk for death from all causes in men and women. Smoking effects nearly every body organ and causes issues such as heart disease, stroke, COPD, impaired immune system and delay in surgical incision and wounds.

Cigarettes contains constituents such as nicotine, carbon monoxide and hydrogen cyanide that effect normal wound healing. Nicotine acts as a vasoconstrictor, which limits the blood flow to the wound, and it increases platelets adhesiveness. Carbon monoxide binds to hemoglobin and causes reduction of oxygen to the wound and hydrogen cyanide inhibits oxygen transport. All these play a major role in poor wound healing.

Inadequate wound healing can lead to infections, delayed hospital stay’s, possible redo surgeries and other issues. Providing education and alternatives to smoking, prior to surgical interventions can help to increase proper wound healing in patients who smoke.

Common signs of poor healing
- Redness or erythema
- Swelling, Induration
- Pain and/or tenderness
- Purulent Drainage / Continued bleeding
- Odor
- Warm or hot skin

4 STAGES OF WOUND HEALING

What’s in cigarette smoke that causes poor wound healing?
- Nicotine acts as a vasoconstrictor which limits the blood flow to the wound
- Carbon monoxide binds to hemoglobin and causes reduction of oxygen to the wound
- Hydrogen Cyanide inhibits oxygen transport which delays healing

Patient Education
- Urge patient to quit smoking at least 3 weeks prior or surgical procedure
- Talk about the effects of smoking on the wound healing process
- Provide patient with resources about effects of smoking on wound healing prior to surgery
- Discuss post op signs and symptoms to look for

Other Alternatives
- Nicotine patch – small transdermal patch that released nicotine through the skin, it is a replacement option to help quit smoking
- Acupuncture
- Hypnotherapy
- Herbal E-Cigarettes – contains herbs instead of tobacco and is less harmful than nicotine
- Lozenges
- Medications such as Bupropion and Varenicline

REFERENCES
- Educate Patients about Effects of Smoking on the Wound Healing Process. Published on November 7, 2018 by Nancy Collins, PhD, RDN, LD, NWCC, FAND

Abstract
Cigarette smoking causes close to 500,000 deaths each year in the United States. It is the cause of 90% of all lung cancers and increases risk for death from all causes in men and women. Smoking effects nearly every body organ and causes issues such as heart disease, stroke, COPD, impaired immune system and delay in surgical incision and wounds.

Cigarettes contains constituents such as nicotine, carbon monoxide and hydrogen cyanide that effect normal wound healing. Nicotine acts as a vasoconstrictor, which limits the blood flow to the wound, and it increases platelets adhesiveness. Carbon monoxide binds to hemoglobin and causes reduction of oxygen to the wound and hydrogen cyanide inhibits oxygen transport. All these play a major role in poor wound healing.

Inadequate wound healing can lead to infections, delayed hospital stay’s, possible redo surgeries and other issues. Providing education and alternatives to smoking, prior to surgical interventions can help to increase proper wound healing in patients who smoke.

Common signs of poor healing
- Redness or erythema
- Swelling, Induration
- Pain and/or tenderness
- Purulent Drainage / Continued bleeding
- Odor
- Warm or hot skin

4 STAGES OF WOUND HEALING

What’s in cigarette smoke that causes poor wound healing?
- Nicotine acts as a vasoconstrictor which limits the blood flow to the wound
- Carbon monoxide binds to hemoglobin and causes reduction of oxygen to the wound
- Hydrogen Cyanide inhibits oxygen transport which delays healing

Patient Education
- Urge patient to quit smoking at least 3 weeks prior or surgical procedure
- Talk about the effects of smoking on the wound healing process
- Provide patient with resources about effects of smoking on wound healing prior to surgery
- Discuss post op signs and symptoms to look for

Other Alternatives
- Nicotine patch – small transdermal patch that released nicotine through the skin, it is a replacement option to help quit smoking
- Acupuncture
- Hypnotherapy
- Herbal E-Cigarettes – contains herbs instead of tobacco and is less harmful than nicotine
- Lozenges
- Medications such as Bupropion and Varenicline

REFERENCES
- Educate Patients about Effects of Smoking on the Wound Healing Process. Published on November 7, 2018 by Nancy Collins, PhD, RDN, LD, NWCC, FAND