

Antiplatelet and Anticoagulant Agents and Dental Procedures

An increasing number of dental patients are taking “blood thinner” medications for various medical conditions. These drugs interfere with the body’s normal clotting (stopping blood flow) mechanism.

There are two main processes by which the body normally forms a blood clot at the site of tissue injury. The first involves small blood cells called platelets which clump together at the wound to form a mechanical plug. This plug slows the flow of blood through the vessel and forms a matrix for the next phase of coagulation. During coagulation chemicals in the blood interact with each other to fill in the spaces between the platelets, stabilize the clot, and make it more solid until the process stops the bleeding.

Antiplatelet agents such as aspirin, Ticlid (ticlopidine), and Plavix (clopidogrel) target the first phase of clot formation by preventing platelets from sticking together and adhering to blood vessels. These agents do this by creating permanent changes in the platelets which last throughout the lifetime of the platelet (7-10 days). These effects can only be countered as the body produces new platelets that have not been exposed to the drug.

Anticoagulant agents such as warfarin (coumadin) inhibit the second phase of clotting by blocking production of proteins that stabilize the clot. Warfarin can only affect these blood proteins when they are being made. This means that it takes several days for the drug to reach full effect and that anticoagulation also goes away slowly when the medication is stopped. Consequently, when changing the levels of anticoagulation, this process must occur gradually. Another important fact is that the effect of warfarin is influenced by many foods and other drugs, resulting in the need for frequent monitoring by the physician.

Many procedures in dentistry can produce bleeding (see Box to Right). Most of the time this bleeding is not difficult to control even in patients who are taking anticoagulation and antiplatelet medications. However, both the effect of these medicines on clotting and the potential for bleeding associated with particular dental procedures is variable. Consequently, it is essential that for each procedure that the risk of bleeding be weighed against the risk of altering the dose or discontinuing the medication.

Some Dental Procedures Associated with Bleeding:

- Dental prophylaxis (teeth cleaning)
- Scaling and root planing (deep teeth cleaning)
- Periodontal (gum) surgery
- Tooth extractions
- Dental implant placement
- Biopsies

Your dentist will want you to provide a thorough and complete medical history. Factors that he/she may ask you to provide include: all current medications; name of your physician; purpose of antiplatelet and / or anticoagulation therapy; anticipated time that you will be on these medications; the results of any laboratory monitoring of the effects of these agents; and any problems that you have had with your medicines. Your dentist may want to consult with your physician and it may be necessary to run some tests before your treatment (see Box to Right). Furthermore, precautions may be made before, during and after the dental procedure to reduce the risk of significant oral bleeding. Do not discontinue or alter your medications without the advice of your physician and dentist.

INR

The INR is shorthand for “International Normalized Ratio.” It is the primary method that health care providers use to measure the degree of anticoagulation that patients have as a result of taking warfarin (coumadin). This test has generally replaced the prothrombin time (PT). For most medical indications, the expected range for anticoagulation as measured by the INR is 2.0 – 3.5. This number gives an approximation of how long someone taking these medications needs to clot in comparison to a normal individual. For example, an INR of 2.0 roughly equates to a coagulation time of twice normal.

QUESTIONS AND ANSWERS ABOUT ANTIPLATELET AND ANTICOAGULANT MEDICATIONS

Q: Is it necessary to check my clotting times before a dental appointment?

A: Depending upon the type of medication you are taking and the type of dental procedure that is to be performed, you may need to obtain specific blood tests that your dentist orders shortly before your dental procedure. This will give your doctor an idea of how your medication is affecting your ability to clot. On the rare occasion when it is recommended that a medication be discontinued, this decision is typically made by discussion between your dentist and your

physician. They will determine when and for how long any medication should be discontinued, and when it should be resumed. These orders should be followed explicitly.

Q: Why not stop my blood thinners before dental care just to be safe?

A: In the past, these medications were discontinued prior to dental procedures because of fear of potential bleeding. However, many studies have since proven that the risks of discontinuing these medications can be very dangerous, and serious bleeding from most dental procedures is very uncommon. Additionally, bleeding can be controlled in the dental office in many ways (pressure, stitches, medications, socket packing, etc.). Therefore, even with surgical procedures these important medications are seldom stopped in modern dentistry.

Q: What measures can I take to minimize bleeding after a dental procedure?

A: Most invasive dental procedures result in bleeding that is well controlled if simple procedures are followed. For example, after surgical treatment applying firm pressure on the bleeding sites for 30 minutes with moist gauze or tea bags will usually stop the bleeding. Patients should refrain from spitting, rinsing, using a straw, drinking hot beverages, and smoking for at least the first 24 hours. Also, patients should avoid eating hard or sharp foods (such as pretzels, chips, nuts) for the first two to three days. Your dentist may also prescribe certain medications that can help minimize bleeding. Follow the instructions given to you by your dentist.

Q: At what point do I seek help for oral bleeding and whom should I contact?

A: If at any time you have a concern regarding bleeding after surgery, you should feel free to contact your dentist or oral surgeon. If all the local precautions described above are taken and there is significant blood loss; meaning continuous bleeding that occurs for more than several hours, or the formation of a very large blood clot (a “liver clot”), then you clearly should seek help. Your dentist or oral surgeon should provide you with a means of contact after hours (i.e.: office number, on-call pager), and failing that, you should visit your local emergency room.

Q: What other precautions should I take if I am on antiplatelet or anticoagulant medications?

A: If you are prescribed a new medication while taking anticoagulants, make sure your prescribing doctor understands you are on these medications. Your pharmacy will also check for drug interactions, and if you have any doubts, consult your physician/ dentist to ensure there is no conflict. Be aware also that over-the-counter medications such as Motrin, Advil and Aleve, can result in antiplatelet effects. Additionally “herbal” or “non-traditional” medications can interfere with, or increase the effects of your anticoagulant medications. Before you take any new medication whether prescribed or over-the-counter, you should check with the provider that prescribed your anticoagulant medications!

Additional Information May be Obtained from the American Heart Association

- [What are Anticoagulant and Antiplatelet Agents?](#)
- [Antiplatelet Agents](#)
- [Aspirin in Heart Attack and Stroke Prevention](#)

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