

New Way to Decrease Over-Prescribing of Antibiotics

Respiratory tract infections account for as much as 75 percent of all antibiotics prescribed. But antibiotics can treat only infections caused by bacteria, and most respiratory tract infections are caused by viruses. Doctors know this, yet they often write antibiotic prescriptions on the off chance that the root cause of the infection is bacterial—or that there's a secondary bacterial infection on top of the viral one. This was once thought to be an innocuous practice, but it is now understood that over-prescribing antibiotics leads to antibiotic resistance: harmful bacteria become immune to the effects of the medication and difficult to kill should they cause an illness in the body at a later time. Doctors often have to switch a patient from antibiotic to antibiotic until one is found that the bacteria can't outsmart. The only real solution is to know from the get-go whether an infection is bacterial or viral.

New research may make that possible. In a recent Swiss study of almost

250 patients with suspected lower respiratory tract infections such as bronchitis or pneumonia, all received standard care (exam, temperature taken, etc.), but half also got a special blood test. The test detected elevated levels of a protein called procalcitonin, which would be expected with a bacterial (but not a viral) infection. Those who had the blood test were only half as likely as the other group to receive antibiotics, yet they enjoyed the same recovery rate. The blood test determined that, in many cases, the antibiotics probably weren't necessary.

The test can't take the place of a doctor's considered opinion. Procalcitonin levels may not be elevated in early-stage bacterial infections, so a physician has to make a judgment call about whether to prescribe an antibiotic if not prescribing one could end up doing more harm than prescribing one unnecessarily.

The blood test for procalcitonin is currently approved for use in Europe. It is awaiting approval in the US.

Ask Tufts Experts

Q I have fish a few times a week but heard about new guidelines warning against eating fish because of high mercury levels. Should I cut back on my fish intake?

A Probably not. The new guidelines apply only if you are a woman who may become or is currently pregnant, a nursing mother, or a young child—mercury can cause neurological damage in unborn babies and young children. Even for these groups, out-and-out "avoid" advice applies only to certain species of fish.

They should not eat any shark, swordfish, king mackerel, or tilefish. As for other types of fish, the government recommends that the vulnerable groups eat up to 12 ounces a week.

Note: Canned white albacore tuna has more mercury than canned light tuna, so only one 6-ounce can of albacore tuna should be consumed in a week by women of childbearing age or children.

Q You recently wrote that a calcium build-up in the arteries can signal an impending heart attack. Is the build-up the result of too much calcium in the diet?

A No. "The calcium that builds up in arteries is independent of the calcium you consume, most of which goes into your bones," says Alice Lichtenstein, DSc, director of the Cardiovascular Nutrition Laboratory at Tufts. What happens is that deposits of fatty plaque in the arteries contribute to the production of a protein that binds *minute* amounts of calcium circulating in the blood. Thus, the artery walls become "calcified."

Recipe card

SPINACH & CHICKEN SALAD WITH MANGO

Warmer weather calls for lighter-tasting fare. This vibrantly colored meal, easily prepared, makes a satisfying salad supper. Whenever you are roasting or grilling chicken, make a little extra so you can enjoy the leftovers in a salad the following day. Alternatively, you can purchase cooked rotisserie chicken in most supermarkets.

DRESSING

1/4 cup orange juice
1/4 cup extra-virgin olive oil
2 Tbsp apple cider vinegar
1 1/2 tsp ground cumin
1/2 tsp dried oregano
1 tsp honey
1 clove garlic, minced
1/4 tsp salt, or to taste
Freshly ground pepper to taste

SALAD

1 (15 1/2-oz) can black beans, drained and rinsed
6 cups baby spinach (one 6-oz pkg), washed and dried
2 cups shredded or sliced skinless cooked chicken (10 oz)
2 ripe but firm mangos, diced
1 small red bell pepper, seeded and diced
1/2 cup diced red onion

To make dressing: Combine all dressing ingredients in a jar with a tight-fitting lid or a small bowl; shake or whisk to blend.

To make salad: Place beans in a medium bowl. Add 1/4 cup of the dressing and toss to coat. Let stand for about 10 minutes while you prepare remaining salad ingredients.

Just before serving, place spinach, chicken, mangos, red pepper, and onion in a large bowl. Add remaining dressing and toss to coat. Divide salad among 4 plates. Top each serving with beans.

Yield: 4 (3-cup) servings

Per serving: *Calories:* 450 *Fat:* 18 grams *Saturated fat:* 3 grams
Sodium: 510 milligrams *Fiber:* 10 grams *Carbohydrates:* 43 grams

Did you know... A ripe mango gives off a fruity aroma from the stem end and yields to gentle pressure. Keep not-quite-ripe mangos at room temperature, not in the refrigerator.

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