Reduce pill use by spotting micronutrient deficiencies

PhD candidate Wout van Orten-Luiten (Human Nutrition & Health) studied the association between the use of medication and vitamin and mineral deficiencies in the blood. 'If doctors can spot such deficiencies, that can help reduce the unnecessary use of medication and unwanted side effects.'

Medicines have side effects that are not always desirable. Van Orten-Luiten: 'Medicines can cause micronutrient deficiencies in our blood. These vitamin and mineral deficiencies can in turn lead to new complaints. Doctors often don't realize these complaints are side effects of the medication, and so they prescribe yet more medicines rather than tackling the deficiencies. For example, patients with diabetes are often given metformin to reduce the blood sugar level, but a side effect of this medicine is that it reduces the amount of vitamin B12 in the blood. This can eventually lead to a deficiency in vitamin B12, possibly resulting in nerve pain. If doctors don't realize what has caused the nerve pain, they are likely to prescribe another medicine to treat the problem. The metformin can also cause stomach problems in patients, and they may be given another pill for that. But a possible side effect of such gastric acid suppressants is a further reduction in the amount of vitamin B12 in the blood and in magnesium levels. A magnesium deficiency increases the risk of heart rhythm disorders, and yet more medicines may be prescribed to treat that problem.'

'Doctors often don't realize complaints are side effects, so they prescribe more medicines'

Nutrition

In her thesis, Van Orten-Luiten looks at the associations between various medicines and vitamin D, magnesium and sodium. 'Doctors don't know much about the interactions between nutrients and medicines. But the medical world is trying to reduce the unnecessary use of medicines and the associated side effects. My thesis adds useful knowledge from the nutritional perspective.' DV