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Serious Reactions For Quinolones

The quinolones also referred to as fluoroquinolones are a family of synthetic broad-spectrum antibiotics. They prevent bacterial DNA from unwinding and duplicating. Recent evidence has shown that topoisomerase II is also a target for a variety of quinolone-based drugs.

Fluoroquinolones are divided into 2 groups, based on antimicrobial spectrum and pharmacology:

Older group: Ciprofloxacin (Ciprobay®),Norfloxacin (Noroxin ®)and Ofloxacin (Tarivid ®).

Newer group: Gatifloxacin (Tequin®), Levofloxacin (Tavanic®), Pefloxacin (Peflacin®), Lomeofloxacin (Lomeoflox®) and Moxifloxacin (Avalox ®).

Some of the serious adverse drug reactions ADRs which occur more commonly with fluoroquinolones than with other antibiotic drug classes include :

central nervous system (CNS) toxicity, phototoxicity, cardiotoxicity, arthropathy and tendon toxicity. Children and the elderly are at greater risk.

ADRs may manifest during, as well as sometimes long after fluoroquinolone therapy has been discontinued. Events that may occur in acute overdose are rare and include renal failure and seizure.

Quinolones in comparison to other antibiotic classes rank amongst the highest for risk of causing colonisation with MRSA and C Difficile. As a result of this, a general avoidance of fluoroquinolones is recommended based on the available evidence and clinical guidelines.

In 2008, the most widely used fluoroquinolones in the United States included ciprofloxacin, Levofloxacin and Moxifloxacin. Many others have been removed from the market, at least in some countries, due to serious ADRs and safety concerns, including Gatifloxacin in 2006(because of hypoglycemia and hyperglycemia) , grepafloxacin in 2003, Temafloxacin in 1992, Trovafloxacin (because of severe hepatic toxicity) and Alatrofloxacin. Other quinolones have had their licensed indications restricted in certain countries due to toxicity issues.

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These include Sparfloxacin (Parox, Spara®) in 1995, Norfloxacin in 2008 and Moxifloxacin in 2008.

The U.S. Food and Drug Administration (FDA) has investigated case reports they have received for tendon rupture. Based on their analysis of case reports they have concluded that fluoroquinolones may cause long term damage in rare cases. A Swedish study found that fluoroquinolones occasionally cause peripheral neuropathy which in a sizable proportion of cases was long lasting.

Only limited research has been conducted into the long term effects of fluoroquinolones making epidemiology statistics of the incidence of fluoroquinolone toxicity difficult to ascertain.

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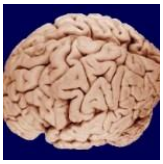
Incredibly Weird Facts About the Human

1. **Your brain operates on 10 watts of power:** The amazing computational power of your brain only requires about 10 watts of power to operate.

2. **A higher I.Q. equals more dreams:** The smarter you are, the more you dream. A high I.Q. can also fight mental illness.



3. **Your smell is unique**: Your body odor is unique to you — unless you have an identical twin. Even babies recognize the individual scents of their mothers.

4. **Adrenaline gives you super strength:** Yes, with the proper response in certain situations, you really can lift a car.

5. **Male Uterus:** Yeah, men have one too — sort of. The remains of this undeveloped female reproductive organ hangs on one side of the male prostate gland

6. Women smell better than men: Women are better than men at identifying smells.

7. **Your hearing decreases when you overeat**: When you eat too much food, it actually reduces your ability to hear. So consider eating healthy — and only until you are full.

8. **You are taller in the morning**: Throughout the day, the cartilage between your bones is compressed, making you about 1 cm shorter by day's end.

9. **Your tongue is the strongest muscle in your body**: Compared to its size, the tongue is the strongest muscle.

10. **Memory is affected by body position**: Where you are and how you are placed in your environment triggers memory.

FDA Drug Safety Communication: Ongoing review of Avandia (rosiglitazone) and cardiovascular safety

[02-22-2010] The U.S. Food and Drug Administration (FDA) is reviewing data, submitted in August 2009, from a large, long-term clinical study on possible risks with the diabetes drug, Avandia* (rosiglitazone). The clinical study, called the Rosiglitazone Evaluated for Cardiovascular Outcomes and Regulation of Glycemia in Diabetes or RECORD study was designed to evaluate the cardiovascular safety of rosiglitazone, a medication used to treat type 2 diabetes mellitus.

Once FDA completes its review of the data from the RECORD study, the agency will present the totality of new and existing cardiovascular safety data on rosiglitazone at a joint public meeting of the Endocrinologic and Metabolic Drugs and Drug Safety and Risk Management Advisory Committees in July 2010.

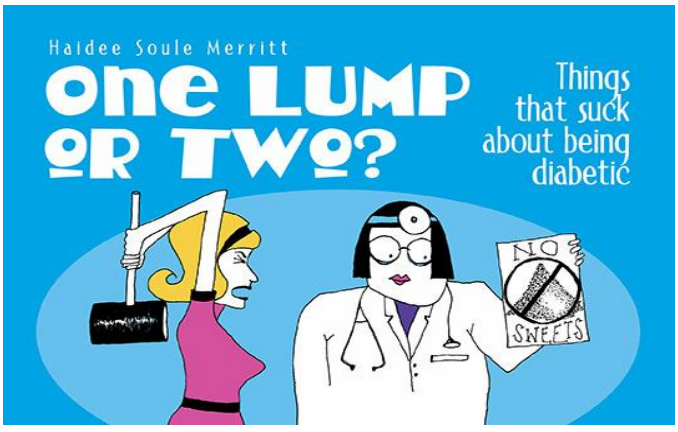
FDA previously communicated to the public about the possible association between rosiglitazone and increased cardiovascular risk in a 2007 safety alert1. The agency also sought advice from external experts at the July 30th 2007 joint meeting of the FDA Endocrinologic and Metabolic Drugs and Drug Safety and Risk Management Advisory Committees. The RECORD study data represent the only new information from a completed randomized, controlled clinical trial of rosiglitazone received by FDA since the 2007 announcements.

FDA recommends that healthcare professionals:

- Use of rosiglitazone in patients with established NYHA Class III or IV heart failure is contraindicated. Further, rosiglitazone is not recommended in patients with symptomatic heart failure .
- Rosiglitazone causes or exacerbates congestive heart failure in some patients. Healthcare professionals should monitor for the signs and symptoms of heart failure (including excessive, rapid weight gain, difficulty breathing, and/or swelling) after starting treatment and after dose increases of rosiglitazone. If heart failure signs and symptoms occur, the heart failure should be managed appropriately and discontinuation or dose reduction of rosiglitazone must be considered.
- Available data on rosiglitazone and risk of myocardial ischemia are inconclusive.

References

1. **Home PD, Pocock, SJ, Beck-Neilsen H, et al. Rosiglitazone evaluated for cardiovascular outcomes in oral agent combination therapy for type 2 diabetes (RECORD): a multicentre, randomized, open-label trial. *Lancet* 2009; 373: 2125.**
2. **http://www.fda.gov/Drugs/DrugSafety.**



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COX-2 inhibitors blunt "preconditioning" effect of statins

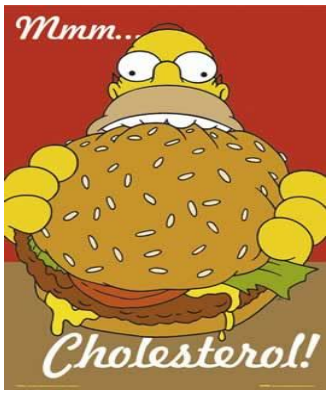
Toronto, ON - The COX-2 inhibitor **celecoxib** (Celebrex, Pfizer) completely abolished the beneficial preconditioning effect of **rosuvastatin** (Crestor, AstraZeneca) in a small mechanistic study in human volunteers . **Dr Andrew Liuni** (University of Toronto) and colleagues report their findings in the March 9, 2010 issue of ***Journal of the American College of Cardiology*.**

Senior author **Dr John D Parker** (University of Toronto) explained that it has been known for some time that exposure to brief periods of ischemia prior to a prolonged period of ischemia can reduce the amount of damage that occurs. This is known as "preconditioning," and some pharmacologic agents, including statins, are thought to have the same effect, a phenomenon termed pharmacological preconditioning.

They conducted a randomized clinical study contained 38 volunteers and measured endothelium-dependent, flow-mediated dilation (FMD) of the radial artery before and after 15 minutes of upper-arm ischemia followed by 15 minutes of reperfusion.

They found that Rosuvastatin prevented the development of ischemia and reperfusion-induced endothelial dysfunction, but pretreatment with celecoxib completely abolished this protective effect.

Parker cautioned, however, that "we are a long way from clinical relevance here, because we've made just a mechanistic observation, but it is interesting. The next step will be to do this in patients."



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2. **http://www.theheart.org.**