

1.7. Beverages – drug interaction :

In life Medicines are used to treat health problems. Nevertheless, it must be taken accurately to ensure their efficacy and safety. Diet and beverages can sometimes have a significant impact on drugs. Recently, drug interactions with fruit juices (beverages) have received considerable attention from basic scientists, physicians, industry and drug regulatory agencies. This interaction can affect the activity of a drug, such effects are either increased or decreased, or even a new effect that neither produces on its own. Interaction occurs because a lot of juices shown to inhibit cytochrome P-450 enzymes and P-glycoprotein transporters in the intestine and liver. The interaction can affect the activity of a drug, because a lot of juices shown to inhibit or induce cytochrome P-450 enzymes or modulate intestinal drug absorption via the P-glycoprotein mediated efflux and organic anion-transporting polypeptide (OATP) mediated uptake transport systems in the intestine and liver. (Alvarez-Gonzalez, *et al.*, 2011), and so are considered to be responsible for alterations in drug bioavailability, and pharmacokinetic and pharmacodynamic changes when drugs are ingested concurrently with it. (Hugo Vanden Bossche, *et al.*, 1995). However, it is well known that risk factors for cardiovascular disease increase with advancing age, while hepatic metabolic activity decreases in elderly individuals. (Rabia Bushra, *et al.*, 2010). It is, therefore, possible that the combination of different juices with cardiovascular medications may pose a health risk, especially in elderly patients. A number of studies have shown interactions of fruit juice with cardiovascular drugs such as calcium-channel blockers, angiotensin II receptor antagonists, beta-blockers, and statins. Such interactions are likely to change the pharmacokinetics and pharmacodynamics of these drugs, consequently causing undesirable health effects. Therefore, health care professionals and the public need to be advised of the potential risks associated with