

Drug in the elderly

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- The proportion of elderly people in the population is increasing steadily in economically developed countries. The elderly are subject to a variety of complaints, many of which are chronic and incapacitating, and so they receive a great deal of drug treatment. There is a growing evidence base for the use of drugs in elderly patients, with important implications for prescribing of many important classes of drugs, including statins, β -adrenoceptor antagonists, thrombolytics, ACE inhibitors, angiotensin receptor blockers, vitamin D and bisphosphonates (see reviews by Mangoni and Jackson, 2006).
- Adverse drug reactions and drug interactions become more common with increasing age. In one study, 11.8% of patients aged 41–50 years experienced adverse reactions to drugs, but this increased to 25% in patients over 80 years of age. There are several reasons for this.

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- Elderly people take more drugs. In one survey in general practice, 87% of patients over 75 years of age were on regular drug therapy, with 34% taking three to four different drugs daily. The most commonly prescribed drugs were diuretics (34% of patients), analgesics (27%), tranquillizers and antidepressants (24%), hypnotics (22%) and digoxin (20%). All of these are associated with a high incidence of important adverse effects.
- Drug elimination becomes less efficient with increasing age, leading to drug accumulation during chronic dosing.
- Homeostatic mechanisms become less effective with advancing age, so individuals are less able to compensate for adverse effects, such as unsteadiness or postural hypotension.
- The central nervous system becomes more sensitive to the
- actions of sedative drugs.
- Increasing age produces changes in the immune response that can cause an increased liability to allergic reactions.
- Impaired cognition combined with relatively complex dose regimens may lead to inadvertent overdose.