

## Calcium and Vitamin D Preparations

### CALCIUM CONTENT OF ORAL CALCIUM PREPARATIONS

| Calcium (Ca) salt | Tablet size, mg | Elemental Ca, mg, % |
|-------------------|-----------------|---------------------|
| Carbonate         | 1250            | 500 (40)            |
| Acetate           | 667             | 169 (25)            |
| Citrate           | 950             | 200 (21)            |
| Lactate           | 325             | 42 (13)             |
| Gluconate         | 500             | 4.5 (9)             |

Fractional intestinal absorption of Ca may differ between Ca salts.

Data from McCarthy and Kumar [19] and *Physicians' Desk Reference* [23].

**FIGURE 5-23**

Calcium (Ca) content of oral Ca preparations.

### VITAMIN D PREPARATIONS AVAILABLE IN THE UNITED STATES

|  | Ergocalciferol<br>(Vitamin D <sub>2</sub> ) | Calcifediol<br>(25-hydroxy-vitamin D <sub>3</sub> ) | Dihydrotachysterol                                   | Calcitriol<br>(1,25-dihydroxy-vitamin D <sub>3</sub> )  |
|--|---|---|--|---|
| Commercial name                                      | Calciferol                                  | Calderol® (Organon, Inc,<br>West Orange, NJ)        | DHT Intensol® (Roxane<br>Laboratories, Columbus, OH) | Rocaltrol® (Roche Laboratories,<br>Nutley, NJ)<br>Calcijex® (Abbott Laboratories,<br>Abbott Park, NJ) |
| Oral preparations                                    | 50,000 IU tablets                           | 20- and 50-µg capsules                              | 0.125-, 0.2-, 0.4-mg tablets                         | 0.25- and 0.50-µg capsules  |
| Usual daily dose                                     |   |   |  |   |
| Hypoparathyroidism                                   | 50,000–500,000 IU                           | 20–200 µg   | 0.2–1.0 mg   | 0.25–5.0 µg   |
| Renal failure  | Not used                                    | 20–40 µg*   | 0.2–0.4 mg*  | 0.25–0.50 µg  |
| Time until increase in<br>serum calcium <sup>†</sup> | 4–8 wk                                      | 2–4 wk  | 1–2 wk   | 4–7 d   |
| Time for reversal of<br>toxic effects                | 17–60 d                                     | 7–30 d  | 3–14 d   | 2–10 d  |

\*Not currently advised in patients with chronic renal failure.

<sup>†</sup>In patients with hypoparathyroidism who have normal renal function.

Data from McCarthy and Kumar [19] and *Physicians' Desk Reference* [23].

**FIGURE 5-24**

Vitamin D preparations.

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