

Guidance for Prescribers: Prescribing Quantities of Insulin Vials or Cartridges

- The chart below gives guidance on how many insulin vials or cartridges should be prescribed per month based on an individual's daily insulin dose.¹
- Packs can be split and **do not have to be prescribed in multiples of five**. Pharmacies that dispense insulin can split packs of pre-filled pens or cartridges, if needed. The expiry date should be clear on the single pen/cartridge being dispensed and supplied with a patient leaflet.
- **Reusable pens for use with 3ml cartridges should not be on repeat prescription**. A maximum of 2 should be issued (in case the one in use becomes faulty). They can last for many years if looked after carefully.
- *Twelve extra units have been added to cover air shots which are needed to ensure insulin pens are correctly primed. An air shot uses 2-3 units and it may sometimes take more than one air shot to prime the insulin pen.¹

Calculation chart for the monthly amount of insulin to be prescribed in relation to daily dose taken

Daily dose	Using pens and cartridges			Using syringes and vials (no air shot required)	
	Number of units used with air shots* when changing pen needles Daily units	Number of units used with air shots* (3ml cartridges or pens) Monthly units	Number of 3ml cartridges or pens (containing 300 units) needed per month on prescription	Number of units required Monthly	Number of 10ml (1,000 units) vials needed per month on prescription
10 units	22	616	2	280	1
20 units	32	896	3	560	1
30 units	42	1176	4	840	1
40 units	52	1456	5	1120	2
50 units	62	1736	6	1400	2
60 units	72	2016	7	1680	2
70 units	82	2296	8	1960	2
80 units	92	2576	9	2240	3
90 units	102	2856	10	2520	3
100 units	112	3136	11	2800	3
110 units	122	3416	12	3080	4
120 units	132	3696	13	3360	4
130 units	142	3976	14	3640	4
140 units	152	4256	15	3920	4
150 units	162	4536	16	4200	5

To note: Insulin calculation will be needed for each type of insulin being used. At times of sickness, infection, pregnancy, or steroid treatment, more insulin will be required for that period. People with type 1 and type 2 diabetes who vary insulin dose with meals will need enough to cover the average amount used each month.

Quick glance: Total daily dose (in units) = number of boxes of 5 x 3ml cartridges or pens needed for 28-day supply.¹

1 - <50 units = 1 box; 50 - <100 units = 2 boxes; 100 - <150 units = 3 boxes; 150 - <200 units = 4 boxes

References

1. Diggle J. How to calculate the amount of insulin to prescribe per month. *Diabetes & Primary Care* 2017; 19(5): 197-198. <https://www.diabetesonthenet.com/journals/issue/456/article-details/how-calculate-amount-insulin-prescribe-per-month>
2. South Staffordshire Joint Formulary. Calculation chart for prescribing insulin. Available at <http://www.southstaffordshirejointformulary.nhs.uk/docs/apg/Endocrine-System/Calculation%20Chart%20for%20Prescribing%20Insulin.pdf> Accessed 04/05/20.