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An interrelationship between calcium and antithrombin in blood coagulation.

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Experiments with dilutions of hirudin show that the stronger the antithrombic solution, the less calcium is needed for optimum coagulation; in other words that, to a certain extent, they bear an inverse ratio to each other. In the accompanying table we see tests of plasma containing hirudin (1 : 40,000) to which 3, 4, 5 and 6 drops of a calcium solution were added. We may note that where only 2 drops of hirudin were added, the clotting-time was in all four instances the same; when three drops were added the time was delayed where 6 drops of calcium were used; and where four drops of hirudin were present, coagulation was markedly delayed in both the tubes containing 5 and 6 drops of the calcium solution.

	Hirudin Solution (Drops).			Min.
	2	3	4	
CaCl ₂ 3 drops.	-	-	-	4
	++	+	+	8
	+++	+++	+	12
			+	16
			++	20
		+++	24	
CaCl ₂ 4 drops.	-	-	-	4
	++	+	+	8
	+++	+++	+	12
			++	20
			+++	24
CaCl ₂ 5 drops.	-	-	-	4
	++	+	-	8
	+++	+++	+	12
			++	28
			+++	44
CaCl ₂ 6 drops.	-	-	-	4
	+	+	+	8
	++	++	+	12
	+++	+++	+	20
			++	34
			+++	66