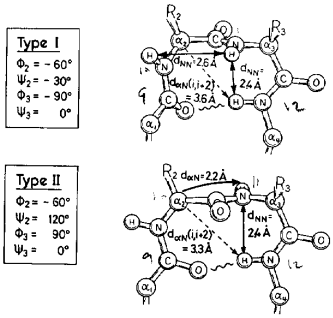

Figure 7.12. Short sequential and medium-range $^1H-^1H$ distances in type I and type I tight turns. The wavy lines indicate hydrogen bonds (from Wüthrich et al., 1984a).

Antiparallel β sheets,	$d_{\alpha\alpha}(i,j) = 2.3$ Å
	$d_{\alpha N}(i,j) = 3.2$ Å
	$d_{NN}(i,j) = 3.3$ Å
Parallel β sheets	$d_{\alpha N}(i,j) = 3.0$ Å
	$d_{NN}(i,j) = 4.0$ Å
	$d_{\alpha\alpha}(i,j) = 4.8$ Å

TABLE 7.1. Short (≤ 4.5 Å) Sequential and Medium-Range $^1H-^1H$ Distances in Polypeptide Secondary Structures

Distance	α-helix	3_{10}-helix	β	β_P	turn I[a]	turn II[a]
$d_{\alpha N}$	3.5	3.4	2.2	2.2	3.4 3.2	2.2 3.2
$d_{\alpha N}(i,i+2)$	4.4	3.8			3.6	3.3
$d_{\alpha N}(i,i+3)$	3.4	3.3			3.1-4.2	3.8-4.7
$d_{\alpha N}(i,i+4)$	4.2					
d_{NN}	2.8	2.6	4.3	4.2	2.6 2.4	4.5 2.4
$d_{NN}(i,i+2)$	4.2	4.1			3.8	4.3
$d_{\beta N}$[b]	2.5-4.1	2.9-4.4	3.2-4.5	3.7-4.7	2.9-4.4 3.6-4.6	3.6-4.6 3.6-4.6
$d_{\alpha\beta}(i,i+3)$[b]	2.5-4.4	3.1-5.1				

[a] For the turns, the first of two numbers applies to the distance between residues 2 and 3, the second to that between residues 3 and 4 (Fig. 7.12). The range indicated for $d_{\alpha N}(i,i+3)$ corresponds to the distances adopted if ψ_1 is varied between −180 and 180°.
[b] The ranges given correspond to the distances adopted by a β-methine proton if χ^1 is varied between −180 and 180°.