

Fig. E-1

In the trap door technique, an osteotome is used to create a trap door in the iliac crest, which is then hinged open to access the cancellous bone.



Fig. E-2

In the inner table technique, the abdominal muscles and iliacus muscle are carefully elevated to access the inner table of the iliac crest. Cortical bone is elevated in strips to access the cancellous bone graft through the inner table.

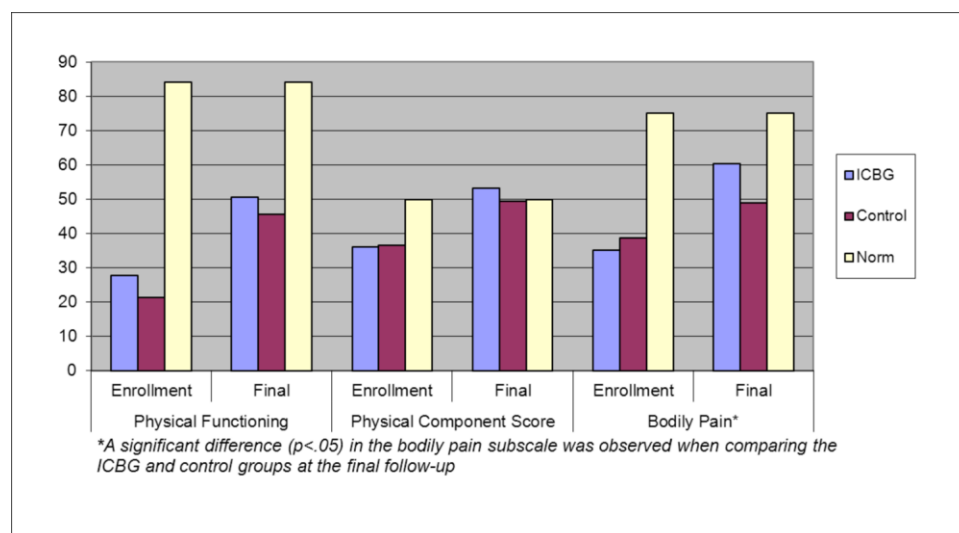


Fig. E-3

Short Form-36 (SF-36) subscores at enrollment and final follow-up (at least twelve months postoperatively). Although there had been no significant differences in preoperative SF-36 subscale scores between the iliac crest bone graft (ICBG) and control groups, the bodily pain subscale score was superior in the ICBG group at the final follow-up, whereas the other SF-36 subscores remained similar. * $p = 0.020$.

TABLE E-1 Pain According to Surgical Technique

	Pain on a Visual Analog Scale of 0 to 10			
	2 Weeks	6 Weeks	3 Months	≥1 Year
Trap door, n = 55*	4.2 ± 2.8	1.3 ± 1.8	0.83 ± 1.7	0.35 ± 1.2
Inner table, n = 37*	3.8 ± 2.8	1.6 ± 2.2	0.97 ± 1.4	0.09 ± 0.45
P value	0.24	0.67	0.73	0.12
95% confidence interval of difference	−0.45, 1.2	−0.72, 0.12	−0.56, 0.28	−0.16, 0.68

*Values are given as the mean and the standard deviation.

TABLE E-2 Characteristics of the Three Patients with Deep Infection at the Donor Site*

Patient	Diabetes	Smoking	BMI (kg/m^2)	Preop. Antibiotics	Microorganism
1	Yes	No	35	Yes	MSSA
2	No	Yes	45	Yes	MSSA
3	No	Yes	27	No†	MRSA

*BMI = body mass index, MSSA = methicillin-sensitive *Staphylococcus aureus*, and MRSA = methicillin-resistant *Staphylococcus aureus*. †Preoperative antibiotics were delayed because of a history of infected nonunion, to reduce the possibility of a false-negative culture at the recipient site.

TABLE E-3 Short Form-36 Scores According to Time

	Mean at Enrollment	Mean at Final Follow-up	P Value
ICBG group*			
Physical functioning	27.8	50.56	<0.001†
Role-physical	9.2	38.43	<0.001†
Bodily pain	35.05	60.4	<0.001†
General health	64.6	65.4	0.396
Vitality	43.8	51.1	<0.001†
Social functioning	50.5	66.0	0.003†
Role-emotional	49.1	54.3	0.018†
Mental health	63.4	66.9	0.046†
Physical component summary	36.1	53.3	<0.001†
Mental component summary	54.3	60.7	<0.001†
Control group‡			
Physical functioning	21.3	45.5	0.11
Role-physical	6.3	37.5	0.009†
Bodily pain	38.6	48.9	0.036†
General health	69.6	63.9	0.677
Vitality	46.7	51.6	0.25
Social functioning	31.5	55.1	0.002†
Role-emotional	30.6	57.6	0.08
Mental health	61.5	65.5	0.411
Physical component summary	36.5	49.5	0.023†
Mental component summary	51.7	58.7	0.248

*ICBG = iliac crest bone graft. N = 76 at enrollment and n = 54 at the final follow-up. †Significant. ‡N = 24 at enrollment and n = 22 at the final follow-up.

TABLE E-4 Short Form-36 Scores of ICBG and Control-Group Patients Who Achieved Fracture Union*

Subscale	Mean at Enrollment			Mean at ≥ 12 Months		
	ICBG, Healed	Control, Healed	P Value	ICBG, Healed	Control, Healed	P Value
Physical functioning	27.3	27.7	0.964	54.3	55.0	0.513
Role-physical	10.5	8.8	0.820	41.5	46.4	0.479
Bodily pain	35.5	46.2	0.046†	62.2	55.1	0.994
General health	64.7	71.3	0.195	64.5	64.6	0.639
Vitality	43.9	49.7	0.312	52.6	51.8	0.671
Social functioning	50.6	54.4	0.648	67.8	62.5	0.868
Role-emotional	50.3	29.4	0.085	55.3	66.7	0.515
Mental health	63.0	61.2	0.713	66.8	64.3	0.984
Physical component summary	36.4	40.7	0.305	55.1	54.6	0.519
Mental component summary	54.5	53.2	0.810	61.4	62.0	0.595

*ICBG = iliac crest bone graft. †Significant at the $p < 0.05$ level.