

## Microtia Repairs Comparisons

		Synthetic Plastic Grafts				Compare!	Natural Rib Cartilage Grafts	
		External Prosthesis Glue Attached	External Prosthesis Dental Implant Attached	Silicon with TP Flap Endoscopic Reduces Hairloss at Scalp Seam	Medpor with TP Flap Endoscopic Reduces Hairloss at Scalp Seam	Brent/Mark M. Jones Classic 3-4 Stages	Japanese Nagata/Firmin Two-Stage	Griffin TP One-Stage Ribgraft/Medpor (prefers rib graft)
<b>Before Surgery</b>	Age to begin	5-6	5-6	5-6	5-6	5-6	10	3+
	Opening ear canal for hearing	No	No	No	Option before, not after	Option, prefer after	Option, prefer after	Possible in some cases
	MR Argiogram or equivalent	No	No	Yes	Yes	No	No	Yes
<b>After Surgery (Longterm)</b>	Anesthesia and duration	Yes, 1-2 hours	Yes, 2-3 hours	Yes, 3-5 hours	Yes, 3-5 hours	Yes, 3-4 hours	Yes, 4-6 hours	Yes, 10-20 hours
	Major complications	No	Infection, drainage	Flap loss	Flap loss	Minimum rib loss	More rib loss	Flap compromised
	Natural materials	None	None	None	None	All	All	Yes/No
	Artificial materials	Yes	Yes	Yes	Yes	No	No	Sometimes
	Time in surgery	1-2 hours	2-3 hours	3-5 hours	3-5 hours	2.5-3.5 hours, 1 h, 2-3 hrs	4-6 hours, 3-5 hours	10-20 hours
	Hospitalizations (total)	1	1	2	2	2-4	2	1-3
	Outpatient	1	1	1	1	1-3	1	1-2
	Inpatient (overnight)			1	1	1	1	1
	Infection	Low risk	High risk	High risk	Medium risk	Low risk	Low risk	Low/Medium risk
	Exposure	Low risk	Low risk	High risk	Medium risk	Low risk	Medium risk (14%)	Medium/High risk
	Chest scar	No	No	No	No	One incision	Two incisions	One incision/None
	Scar on scalp	No	No	Yes	Yes, usually	No	Yes, 2nd stage	Yes
	Hair cutting for surgery	No	No	Yes	Yes, usually	No	Yes, 2nd stage	Yes
	Skin grafting	No	No	Yes, in front of/over ear	Yes, in front of/over ear	Yes, behind ear	Yes, behind ear	Yes, front of/over ear
	Vasc. compr. & major tissue loss	No	No	High risk	Medium risk	Low risk	Medium risk	Medium/High risk
	Time span over surgeries	N/A	N/A	6 months	6 months	2-8 months	4-6 months	N/A
	Ear flexibility	No	No	Some	Stiff	Some	Some	Some
	Sensation	No	No	Decreased to numb	Decreased to numb	Decreased to normal	Decreased to numb	Decreased to numb
	Convenience	Daily application	Daily application	Normal bathing	Normal bathing	Normal bathing	Normal bathing	Normal bathing
	Longevity	5 years	5 years	All removed eventually	Unknown	Lifelong	Lifelong	Unknown
Ear skin color	Changes daily	Changes daily	Some difference	Some difference	Same as skin	Same as skin	Some difference	
Ear skin texture	Major difference	Major difference	Shiny-like skingraft	Shiny/like skingraft	Normal skin	Normal skin	Shiny-like skingraft	
Rejection	No	No	Lifelong risk	Lifelong risk	No	No	No/Lifelong risk	
Infection	None	Lifelong risk	Lifelong risk	Lifelong risk	Normal	Normal	Mild risk/Normal	
Implant fracture	N/A	N/A	Unknown	>3%	None	None	None/>3%	
Nerve risk to frontal facial nerve	None	None	Yes	Yes	None	None	Yes/Yes	
Exposure/extrusion	No	No	Lifelong risk	7% after 12 years	<1%	Some 8%	Mild risk/7%	
Ear detachment	Yes	Yes	No	No	No	No	No	
Trauma resilience/durability	Falls off	Falls off	Poor resistance	Moderate resistance	Normal ear	Normal ear	Unknown	
Chest scar	No	No	No	No	One, no phys. limitations	Two	One/No	
Scar on scalp	No	No	Yes	Yes, usually	No	No	Yes	
Permanent hair loss	No	No	High risk	High risk	No	Yes	High risk	
Options for repair of damaged ear	Yes	Compromised	Compromised	Compromised	TP flap available	Compromised	Compromised	
Worry of future complications								
Insect bites	No	No	High risk	Medium risk	Normal ear	Normal ear	Normal ear/Medium risk	
Playground trauma	Falls off	Falls off	High risk	Medium risk	Normal ear	Normal ear	Normal ear/Medium risk	
Other blunt trauma	Falls off	Falls off	High risk	Medium risk	Normal ear	Normal ear	Normal ear/Medium risk	
Infections	None	Medium risk	High risk	Medium risk	Normal ear	Normal ear	Normal ear/Medium risk	
Sports limitations	Yes	Yes	Yes	Yes	No	No	No/Yes	
Time post-op in town	1 day	1 day	2-3 weeks	2-3 weeks with cup	1st 7-10 days, others 1 day	2-3 weeks	2-3 months	
Retain normal ear components	Yes	Sometimes	No	No	Yes	Compromised	Unknown	
Time post op. ear swelling	None	1 week	6 months	6 months	4-6 weeks	6 months	6 months	
Time post op. to wear protective dressing	None	1 week	3 weeks	3 weeks	9-10 days	Weeks to months	Weeks to months	

**Bibliography**

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