



**American Association of Tissue Banks**

**2007 Annual Survey Results  
for  
AATB-Accredited Tissue Banks  
in Canada**

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## CANADIAN TISSUE BANKS

### OVERVIEW

7 Tissue Banks in Canada participated in the 2007 American Association of Tissue Banks' Annual Survey. These Canadian Tissue Banks are accredited by the AATB and completed the recovery, processing, storage, and distribution surveys.

3 of the 7 Tissue Banks were inspected by the American Association of Tissue Banks in 2007. Also, 4 Tissue Banks underwent ISO audits, 1 was inspected by CAP, and 1 was inspected by another agency.

### RECOVERY

Canadian Tissue Banks recovered tissue from 795 donors in 2007, of which 400 were deceased and 395 were living. Of the 400 deceased donors, 140 had autopsies performed. 115 were organ donors, and 135 were also ocular donors. The donors were recovered in the following categories:

	Tissue Banks		Donors
	number	%	total
<b>TISSUE FROM DECEASED DONORS</b>			
Musculoskeletal	6	85.7%	142
Soft Tissue	7	100%	156
Cardiac	7	100%	203
Vascular	0	0%	0
Skin	5	71.4%	160
Other Tissue from Deceased Donors	2	28.6%	55
<b>TISSUE FROM LIVING DONORS</b>			
Living Donor Tissue	4	57.1%	397

Tissue from deceased donors was primarily recovered for hearts (201 donors), thin skin (158 donors), bone (142 donors), and ligaments and tendons (100 donors). Tissue from living donors was primarily recovered for surgical/allogeneic bone (375 donors).

Of the 400 deceased donors, 298 (75%) were recovered from Health Care Facility Operating Rooms, and the remaining 102 (25%) were recovered from Dedicated Tissue Recovery Suites (own facility).

Tissue Banks reported 1,550 donor referrals were made in 2007, and 1,299 (84%) of them were made by hospitals.

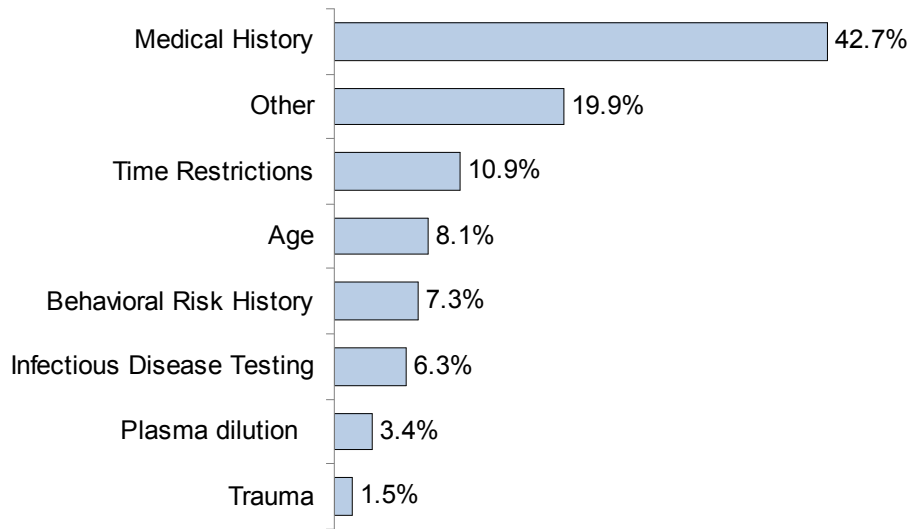
The average Tissue Bank made 342 approaches for Consent, of which 60 (18%) were denied. 255 donor consents were obtained, and tissue was recovered from approximately 45% of those donors.

	<b>Donors</b>
	total
How many approaches did your Tissue Bank make for consent?	1,026
How many consents did your Tissue Bank obtain in total?	1,018
If available, enter the number of consents that came from First Person/Donor Designated Consent/Registry	243
If available, enter the number of consents from Next of Kin or Other Consenting Person(s)	464
How many Consents were denied to your Tissue Bank?	239
How many approaches were unsuccessful because NOK were unavailable?	6
How many Consents were obtained but not recovered?	291

Only a subset of Tissue Banks answered the above questions. Average per bank is based on the number of Tissue Banks that responded to each question.

Similar to U.S. Tissue Banks, successful consents for donation were obtained almost exclusively by Tissue Bank Personnel (56%), Hospital Personnel (27%) and OPO Personnel (16%).

Donor Referrals were determined ineligible during screening (prior to going on site for recovery) for the following reasons:



Other reasons referrals were determined ineligible included: no cause of death/coroner refusal; consent; patient expired without notice; and, coroner and pathologist refusal.

Donors were determined ineligible at the site of recovery mainly due to issues related to chart findings (38%), physical exam findings (28%), and logistics (25%).

Donors were determined ineligible after recovery due to issues related to medical history (47%), pre-processing cultures (21%), and infectious disease testing (21%).

## PROCESSING

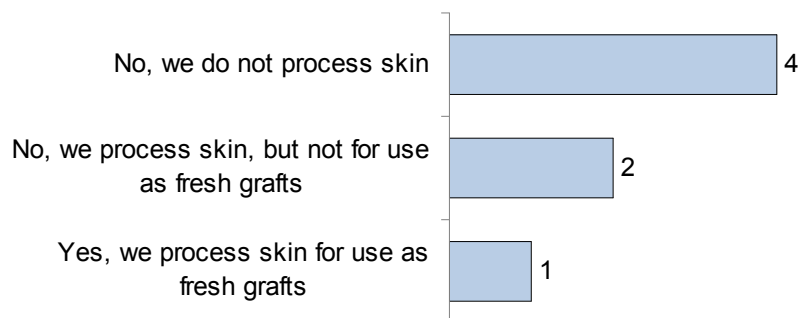
In total, Tissue Banks processed 665 donors. 6 of the 7 Tissue Banks processed musculoskeletal and soft tissue, and 4 of the 7 Tissue Banks processed skin and cardiac and/or vascular tissue. 4 Tissue Banks processed tissue from living donors. Listed below are the tissues processed by Canadian Tissue Banks.

	Tissue Banks		Donors
	number	%	total
<b>TISSUE FROM DECEASED DONORS</b>			
<b>Musculoskeletal</b>	6	85.7%	233
Bone	6	85.7%	295
Cartilage	1	14.3%	1
Osteoarticular Grafts - Fresh	1	14.3%	5
<b>Soft Tissue</b>	6	85.7%	174
Fascia Lata	3	42.9%	129
Ligaments	1	14.3%	24
Tendons	6	85.7%	138
Pericardium	1	14.3%	5
<b>Cardiac and/or Vascular</b>	4	57.1%	170
Arteries	1	14.3%	1
Heart Valves	4	57.1%	146
Non-valved Conduits	4	57.1%	44
<b>Skin</b>	4	57.1%	146
Thin	3	42.9%	144
Thick	1	14.3%	2
<b>Other Tissue from Deceased Donors</b>	1	14.3%	33
<b>TISSUE FROM LIVING DONORS</b>			
Amniotic Membrane/Placenta	1	14.3%	5
Autologous Bone	2	28.6%	17
Surgical/Allogeneic Bone	3	42.9%	375

Tissue Banks did not treat tissues with irradiation prior to processing (non-terminal irradiation). 1 of the 7 Tissue Banks used Gamma Radiation only, above 2.5 Mrads (or 25 kGy) to treat tissues with irradiation to reduce/eliminate microorganisms as a final treatment (terminal irradiation).

An antibiotic was utilized for musculoskeletal grafts (1,689 grafts total) and soft tissue grafts (68 grafts total) during processing. Most of the Tissue Banks did not process demineralized bone.

1 Tissue Bank processed skin for use as fresh grafts as seen in this breakdown:



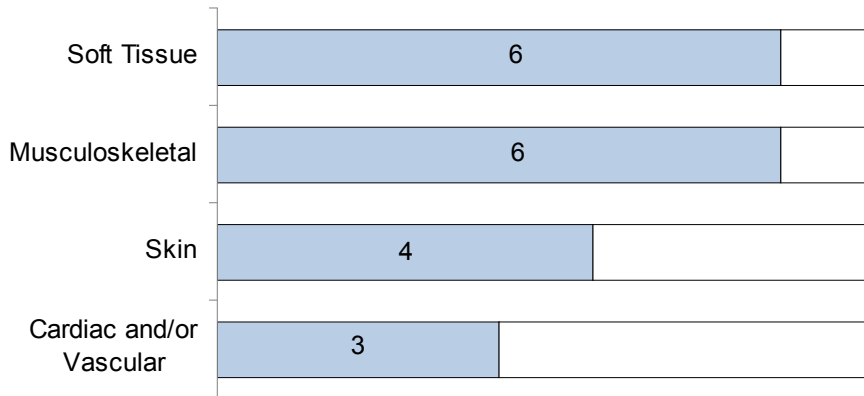
Tissue Banks only processed tissue recovered from AATB-Accredited Tissue Banks. They processed 233 musculoskeletal donors, 174 soft tissue donors, and 94 skin donors from AATB-Accredited Tissue Banks in 2007.

To confirm a repeat-reactive syphilis screening test, the most frequently (by 4 Tissue Banks) relied upon test was FTA – ABS.

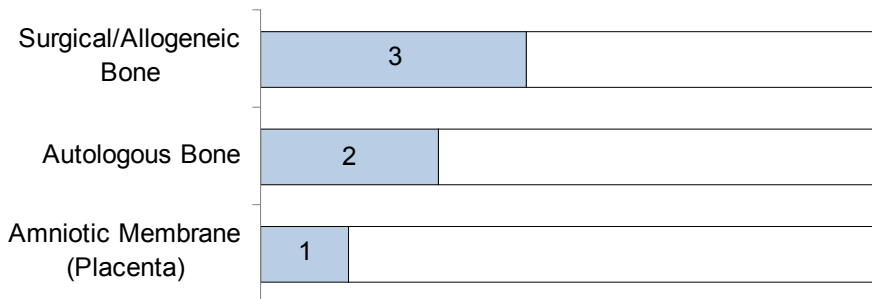
**STORAGE**

All 7 participating Tissue Banks stored tissue in 2007. 6 of the 7 Tissue Banks stored unprocessed tissues, and all Tissue Banks stored processed tissues. A breakdown of the tissues stored is listed below.

**Unprocessed Tissues from Deceased Donors (Total of 7 Tissue Banks)**



**Unprocessed Tissues from Living Donors (Total of 7 Tissue Banks)**



**Processed Tissues (Total of 7 Tissue Banks)**

	Tissue Banks	
	number	%
<b>TISSUE FROM DECEASED DONORS</b>		
<b>Musculoskeletal</b>	6	85.7%
Bone	6	85.7%
Cartilage	1	14.3%
Osteoarticular Grafts	1	14.3%
<b>Soft Tissue</b>	7	100.0%
Fascia Lata	3	42.9%
Ligaments	2	28.6%
Tendons	5	71.4%
Pericardium	2	28.6%
<b>Cardiac and Vascular</b>	4	57.1%
Arteries	1	14.3%
Heart Valves (and/or Conduits)	4	57.1%
<b>Skin-Derived Grafts</b>	4	57.1%
Cryopreserved	4	57.1%
<b>TISSUE FROM LIVING DONORS</b>		
Amniotic Membrane	3	42.9%
Autologous Bone	3	42.9%
Skin for Allogeneic Use	1	14.3%
Surgical/Allogeneic Bone	2	28.6%

Tissue Banks stored tissues recently recovered or processed by a variety of methods. All Tissue Banks stored frozen tissue, and 4 of the 7 Tissue Banks stored cryopreserved tissue.

**DISTRIBUTION**

All the Tissue Banks distributed tissue in 2007. Soft tissue was distributed by all Banks, musculoskeletal tissue by 6 Banks, tissue from living donors by 5 Banks, cardiac and/or vascular tissues by 4 Banks, and skin-derived grafts by 4 Banks. 99% of tissues were distributed to Hospitals/Medical Facilities.

**Musculoskeletal Grafts Distributed (Total of 7 Banks)**

	Tissue Banks		Grafts
	number	%	total
<b>TISSUE FROM DECEASED DONORS</b>			
<b>Total Musculoskeletal Grafts Distributed</b>	<b>6</b>	<b>85.7%</b>	<b>3,051</b>
Cancellous Bone (Cubes or Morselized)	3	42.9%	1,567
Corticocancellous Bone	1	14.3%	24
Non-Proprietary Spinal Grafts (Traditional)	2	28.6%	213
Osteochondral – Fresh/Refrigerated	1	14.3%	42
Osteochondral – Frozen/Cryopreserved	2	28.6%	231
Meniscus - Frozen	2	28.6%	12
Large Segment (articular surface not preserved)	6	85.7%	627
Other*	3	42.9%	335
<b>TISSUE FROM LIVING DONORS</b>			
Living Donor Autologous Bone	2	28.6%	8

\*Other musculoskeletal grafts distributed included tricortical wedges, fibula segments, femoral heads, and non-structural tissue for grinding.

**Soft Tissue Grafts Distributed (Total of 7 Tissue Banks)**

	Tissue Banks		Grafts
	number	%	total
<b>TISSUE FROM DECEASED DONORS</b>			
<b>Total Soft Tissue Grafts Distributed</b>	<b>7</b>	<b>100%</b>	<b>940</b>
Fascia Lata	3	42.9%	208
Ligaments	1	14.3%	9
Tendons	6	85.7%	582
Pericardium	1	14.3%	14
Other	1	14.3%	127

**Cardiac/Vascular Tissues Distributed (Total of 7 Tissue Banks)**

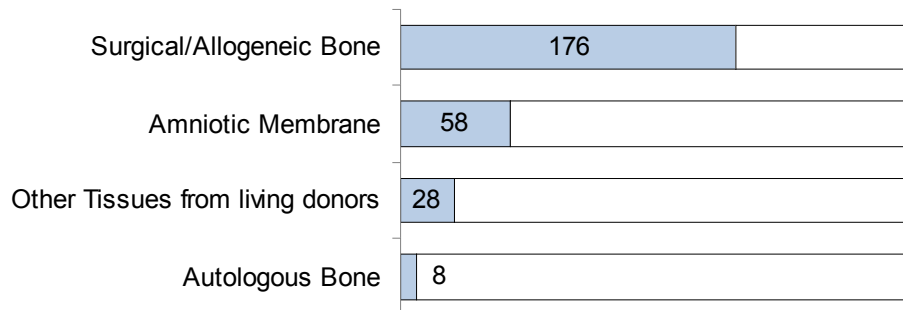
	Tissue Banks		Grafts
	number	%	total
<b>TISSUE FROM DECEASED DONORS</b>			
<b>Total Cardiac Tissue Distributed</b>	<b>4</b>	<b>57.1%</b>	<b>187</b>
Aortic Segment/Conduit (Non-Valved)	4	57.1%	22
Aortic Valves	4	57.1%	52
Pulmonic Segment/Conduit (Non-Valved)	4	57.1%	24
Pulmonic Valves	4	57.1%	89

No Vascular Tissue was distributed in 2007

In 2007, 1,141 packages of skin were distributed by 4 Tissue Banks. Of these packages, 1,130 (99%) were Frozen/Cryopreserved, and all packages were distributed to Hospitals/Burn Centers. One Tissue Bank had 200 requests for skin, which it could not fulfill.

5 Tissue Banks distributed tissues from living donors. 3 of these 5 Tissue Banks were able to provide detail on their distribution of tissues from living donors. These banks distributed 270 grafts in total. See below for the specific tissues from living donors distributed.

**Tissues from Living Donors (Total of 270 grafts)**





5 Tissue Banks did not have an adequate supply of tissue grafts to meet all their requests. Tissues in the highest demand were Achilles Tendons (35 requests), Cortical (35 requests), Patellas (29 requests), Pulmonary Valves (26 requests), Femoral Heads (23 request), and Tibialis Tendons (20 requests).

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