

CONTENTS

List of Figures	xi
Preface	xviii
Acknowledgments	xx
Introduction	1
<i>Beginning Your Journey</i>	2
1. Anatomy and Physiology of the Horse	6
The Nervous System	7
The Respiratory System	10
The Circulatory System	11
<i>The Cardiovascular System</i>	12
<i>The Lymphatic System</i>	13
The Endocrine System	15
The Digestive System	15
The Urinary System	15
The Reproductive System	15
The Skeletal System	18
<i>Bones</i>	18
<i>The Joints</i>	19
<i>The Ligaments</i>	22
The Muscular System	23
<i>Tendons</i>	26
<i>Muscles</i>	26
2. The Horse and Massage Therapy	40
How the Horse Responds	41
<i>The Visual Horse</i>	41
<i>The Auditory Horse</i>	42
Duration of a Massage	42
When to Massage Your Horse	43
How to Approach the Horse You Want to Massage	45
Contraindications to Massaging a Horse	47
Some Massage Do's and Don'ts	49
<i>Do's</i>	49
<i>Don'ts</i>	49
Safety Tips	50

3. Principles and Concepts of Massage	51
Developing Massage Skills	51
<i>Proper Approach</i>	51
<i>Proper Posture</i>	52
Sensitivity of the Hands	54
The Four T's	55
<i>Temperature</i>	55
<i>Texture</i>	55
<i>Tenderness</i>	55
<i>Tension</i>	56
Pressure, Contact, and Rhythm	56
<i>Pressure</i>	56
<i>Contact</i>	58
<i>Rhythm</i>	58
The Main Effects of Massage	59
<i>The Mechanical Effect</i>	59
<i>Pure Nervous Reflex Effect</i>	60
Massage Moves	60
<i>Stroking</i>	60
<i>Effleurage</i>	62
<i>Petrissage</i>	64
<i>Vibration</i>	71
<i>Shaking</i>	73
<i>Friction</i>	75
<i>Nerve Manipulation</i>	77
<i>Tapotements</i>	81
The Laying on of Hands	84
Basic Massage Movements	85
<i>Soothing Massage Movements</i>	85
<i>Stimulating Massage Movements</i>	85
<i>Pure Nervous Reflex Movements</i>	86
4. Hydrotherapy	87
Duration of Treatment	88
Stages of Recovery	88
<i>The Acute Stage</i>	88
<i>The Subacute Stage</i>	88
<i>The In-Between Stages</i>	89
<i>The Chronic Stage</i>	89
Cold	89
<i>Effects of Cold</i>	89
<i>Application of Cold</i>	90
<i>Cold Devices and Techniques</i>	91

	<i>The Ice Cup Massage</i>	92
	<i>Duration of Cold Application</i>	92
	Heat	93
	<i>Effects of Heat</i>	93
	<i>Application of Heat</i>	93
	<i>Heat Devices and Techniques</i>	94
	<i>Duration of Heat Application</i>	94
	Poultices	95
	<i>Common Poultice Mixtures</i>	95
5.	Massage Techniques	97
	The Thumb Technique	98
	The Elbow Technique	100
	The Swelling Technique	102
	<i>Duration of Application</i>	103
	<i>Frequency of Treatment</i>	104
	The Trigger Point Technique	104
	The Neuromuscular Technique	106
	<i>The Golgi</i>	107
	<i>The Muscle Spindle</i>	108
	Stress Points	109
	<i>How Stress Points Form</i>	109
	<i>Where Stress Points Form</i>	110
	<i>How Stress Points Feel</i>	111
	<i>When Stress Points Form</i>	111
	<i>How Horses Respond to Stress Point Work</i>	111
	<i>The Stress Point Technique</i>	112
	The Origin-Insertion Technique	114
	The SEW/WES Approach Technique	116
6.	Massage Routines.....	118
	Relaxation Routines	119
	<i>The Relaxation Massage Routine</i>	120
	<i>The Head Massage Routine</i>	131
	The Maintenance Massage Routine	138
	The Recuperation Routine	144
	<i>Recuperation Routine Outline</i>	144
	The Warm-Up Routine	147
	<i>Warm-Up Routine Outline</i>	148
	The Cool-Down Routine	150
	<i>Cool-Down Routine Outline</i>	151
	Trouble Spots—Routines and Treatments	151

7. Kinesiology of the Horse	153
Motion	154
<i>Kinesiology of the Foreleg</i>	154
<i>Kinesiology of the Hind Leg</i>	159
<i>The Vertebral Column</i>	163
<i>The Rib Cage</i>	164
<i>The Neck</i>	164
The Stay Mechanism of the Horse	167
8. Stretching.....	171
Reasons for Stretching	172
<i>Physical</i>	172
<i>Cerebral</i>	172
When to Stretch	173
How to Stretch	173
<i>Stretching Safely</i>	174
The Stretching Routine	176
<i>Neck Stretches</i>	176
<i>Foreleg Stretches</i>	177
<i>Hind Leg Stretches</i>	181
<i>Back Muscle Stretches</i>	184
9. Conformation Check-up Routine	187
Ground Check Routine	187
<i>Head and Neck</i>	187
<i>Withers</i>	188
<i>Chest, Girth, and Ribs</i>	188
<i>Shoulders</i>	188
<i>Forelegs</i>	189
<i>Knees</i>	189
<i>Cannon Bones</i>	190
<i>Fetlocks</i>	190
<i>Pasterns</i>	190
<i>Feet</i>	191
<i>The Back</i>	191
<i>Loins</i>	191
<i>Hindquarters</i>	192
<i>Stifles</i>	192
<i>Hocks</i>	192
Evaluation of the Horse's Weight Distribution:	
The Float Line	193
<i>Action and Soundness</i>	193

10. Body Parts and Their Stress Points	196
The Head and Neck	196
#1 Stress Point—The Rectus Capitis Ventralis Muscle	202
#2 Stress Point—The Splenius Cervicis Muscle	202
#3 Stress Point—The Brachiocephalic Muscle	203
#4 Stress Point—The Sterno-thyrohyoid and Omohyoid Muscles	203
Other Tension Areas in the Neck	204
The Shoulders	204
The Scapula	205
The Humerus	206
#5 Stress Point—The Spinalis Dorsi Muscle	206
# 6, 7, and 8 Stress Points—The Trapezius and Rhomboid Muscles	207
#9 Stress Point—The Supraspinatus Muscle	207
#10 Stress Point—The Infraspinatus Muscle	208
#11 Stress Point—The Thoracic Part of the Serrate Muscle	209
#12 Stress Point—The Latissimus Dorsi Muscle	209
#13 Stress Point—The Upper End of the Triceps Muscle	210
#14 Stress Point—The Lower End of the Triceps Muscle	211
#15 Stress Point—The Cranial Superficial Pectoral Muscle	211
#16 Stress Point—The Caudal Superficial Pectoral Muscle	212
#17 Stress Point—The Caudal Deep Pectoral Muscle	212
#18 Stress Point—The Radial Carpal Extensor Muscles of the Foreleg	213
#19 Stress Point—The Lateral Carpal Flexor Muscles of the Foreleg	213
The Back and Rib Cage	214
#20 Stress Point—The Longissimus Dorsi Muscle (Forward Attachment)	215
#21 Stress Point—The Iliocostalis Dorsi Muscle	215
#22 Stress Point—The External Abdominal Oblique Muscle (Hip Attachment)	216
#23 Stress Point—The External Abdominal Oblique Muscle (Rib Cage Attachment)	216
#24 Stress Point—The Internal Abdominal Oblique Muscle	217
#25 Stress Point—The Transverse Abdominal Muscle (Pubic Attachment)	217
#26 Stress Point—The Intercostal Muscles	218

The Hindquarters and Hind Legs	218
#27 Stress Point—Junction of the Gluteus Muscles and the Longissimus Dorsi Muscles	219
#28 Stress Point—The Biceps Femoris Muscle	220
#29 Stress Point—The Belly of the Biceps Femoris Muscle	221
#30 Stress Point—The Gastrocnemius Muscle	221
#31 Stress Point—The Vastus Lateralis Muscle	222
#32 Stress Point—The Rectus Femoris Muscle	222
#33 Stress Point—The Adductor Muscles	223
#34 Stress Point—The Semitendinosus Muscle	223
#35 Stress Point—The Semimembranosus Muscle	224
#36 Stress Point—The Tensor Fasciae Latae Muscle	224
#37 Stress Point—The Iliacus Muscle	225
#38 Stress Point—The Superficial Gluteus Muscle	225
#39 Stress Point—The Long Digital Extensor Muscles	226
#40 Stress Point—The Long Digital Flexor Muscles	226
Stress Point Check-up Routine	227
First Sequence	232
Second Sequence	233
Third Sequence	234
The “Trouble Spots” Routine	234
Step 1: The Upper Neck	235
Step 2: The Point of Shoulder	235
Step 3: The Withers	236
Step 4: The Upper Shoulder	236
Step 5: The Lower Shoulder	237
Step 6: The Croup	237
Step 7: The Point of Hip	238
Treatments	238
Back Treatment	239
Neck Treatment	240
The Forequarters Treatment	241
The Hindquarters Treatment	243
11. Equine Myofascial Massage	245
The Fascial System	246
What Is Fascia?	247
The Fascial System and Its Functions	247
Physical Properties of Fascia	248
Preparation	250
Attitude	250
Observation	251
Touch—The Four T’s	251

	<i>Pressure, Contact, and Rhythm</i>	251
	<i>Feedback from the Horse</i>	252
	<i>Emotional Release</i>	252
	Myofascial Release Techniques	254
	<i>Double-Hands Friction Technique</i>	254
	<i>Cross-Hands Technique</i>	255
	<i>The Stroking Technique</i>	257
	<i>The Hand Pressure Technique</i>	258
12.	Equine Temporomandibular Joint Dysfunction Syndrome (ETDS)	260
	Anatomy of the Equine TMJ	261
	<i>Skeletal Structure</i>	261
	<i>Temporomandibular Articulation</i>	261
	<i>Nerve Supply</i>	263
	<i>Vascular Supply</i>	264
	<i>Fascia of the Head</i>	265
	<i>Muscles of Mastication</i>	265
	Causes of TMJ Dysfunction Syndrome	267
	Signs and Symptoms of TMJ Dysfunction Syndrome	268
	TMJ Problems	268
	<i>Caudal Lesion</i>	269
	<i>Rostral Lesion</i>	270
	Palpation	270
	<i>Checking the Protraction and the Retraction of the Mandible</i>	271
	<i>Checking the Latero-Lateral Movement of the Mandible</i>	271
	Checking the Incisive Lines	271
	Massage Guidelines for ETDS	271
	<i>Massage Goals</i>	272
	<i>Duration</i>	273
	<i>The Relaxation Massage Routine</i>	273
	<i>Neck Stretches</i>	273
	<i>Massage Routine for ETDS</i>	273
13.	Lines of Compensation	278
	External Lines of Compensation	281
	<i>Diagonal Lines of Compensation</i>	282
	<i>Transversal Lines of Compensation</i>	286
	<i>Side Lines of Compensation</i>	288
	<i>Summary of the Side Lines and Transversal Lines of Compensation</i>	290
	<i>Summary of all External Lines of Compensation</i>	291

Internal Lines of Compensation	292
<i>Internal Compensation from the Skull</i>	294
<i>Internal Compensation from the Shoulders</i>	295
<i>Internal Compensation from the Hips</i>	295
Summary of External and Internal Lines of Compensation	296
14. Saddle Fitting	298
Saddle Tree	300
Saddle Panels	300
Massage for Cold Back	302
Warning	303
15. Areas of Stress Specific to Each Discipline	305
Guidelines for Treatment	306
School Horses	306
Pleasure Horses	307
Hunters	307
Jumpers	308
Dressage Horses	309
Eventing Horses	309
Endurance Horses	310
Polo Ponies	311
Western Performance Horses	311
Gaited Horses	312
Flat Racing Horses	312
Steeplechase Horses	313
Harness Racing Horses (Trotters and Pacers)	313
Light Harness Horses	314
Draft Horses	314
16. Keeping Records	316
Basic Information About the Horse	317
The Major Complaint	317
The History of the Present Illness or Problem	318
The History of Past Illnesses or Problems	319
Clinical Examination	319
Treatment	320
Program	320
Maintenance	320
Updates	321
Index	324

FIGURES

IN.1	Horse Anatomical Terms	5
1.1	Points of the Horse	9
1.2	Nervous System	10
1.3	Circulatory System	12
1.4	The Lymphatic System: Lymphocenters made of lymph nodes	14
1.5	Skeleton of the Horse	17
1.6	A Bone	18
1.7	Joints of the Horse	21
1.8	A Joint	22
1.9	Ligaments of the Fetlock Joint	22
1.10	Ligaments of the Horse	25
1.11	Cross-Section of a Skeletal Muscle	27
1.12	A Muscle	27
1.13	Superficial Muscles of the Horse	29
1.14	Muscles of the Horse, Front View	33
1.15	Muscles of the Horse, Rear View	35
1.16	Deeper Muscles of the Horse	37
2.1	Body Language	45
3.1	Proper Posture	52
3.2	Proper Posture: Back straight, elbows and knees flexed	54
3.3	Proper Posture: Using body weight for added strength	54
3.4	Stroking Movement	61
3.5	Stroking Massage Movement	61
3.6	Effleurage Movement	62
3.7	Effleurage Massage Movement	62
3.8	Petrissage: Kneading Movement	63
3.9	Double Thumb Kneading Movement	64
3.10	Petrissage: Compression Movement	65
3.11	Palmar Compression Movement	65
3.12	Fist Compression Movement	66
3.13	Petrissage: Muscle Squeezing Movement	67
3.14	Double Hand Muscle Squeezing Movement	67
3.15	Petrissage: Picking-up Movement	68
3.16	Picking-up Movement	69
3.17	Petrissage: Wringing Movement	70
3.18	Wringing Movement	70
3.19	Petrissage: Skin Rolling Movement	71
3.20	Skin Rolling Movement	71
3.21	Vibration Movement	72

xii List of Figures

3.22	Vibration Massage Movement.....	72
3.23	Shaking Movement.....	74
3.24	Shaking Massage Movement	74
3.25	Friction Movement.....	75
3.26	Thumb Friction Movement.....	76
3.27	Finger Friction Movement.....	77
3.28	Hand Friction Movement.....	77
3.29	Nerve Stroking Movement	78
3.30	Nerve Pressure Point Movement.....	79
3.31	Nerve Friction Movement.....	80
3.32	Tapotement: Clapping Movement.....	81
3.33	Clapping Movement	81
3.34	Tapotement: Cupping Movement	82
3.35	Cupping Movement	82
3.36	Tapotement: Hacking Movement.....	82
3.37	Hacking Movement	82
3.38	Tapotement: Beating (Medium Pressure) and Pounding (Heavy Pressure) Movements	83
3.39	Beating or Pounding Movement.....	83
3.40	Laying on of Hands	84
4.1	Ice Massage Technique: Peeling the rim of the foam or paper cup for the ice massage application	90
4.2	Ice Massage Technique: Applied here on the knee ...	92
5.1	Thumb Technique	98
5.2	Thumb Technique	99
5.3	Elbow Technique	100
5.4	Elbow Technique: Using a stool to position yourself better.....	101
5.5	Schematic Diagram of Swelling Technique.....	102
5.6	Schematic Diagram of a Trigger Point, Trigger Point Technique: Toxin buildup in the belly of the muscle, resulting in a trigger point	105
5.7	Neuromuscular Technique: Golgi Nerve Apparatus.....	107
5.8	Neuromuscular Technique: Muscle Spindle Nerve Apparatus	108
5.9	Schematic Diagram of a Stress Point, Stress Point Technique	110
5.10	Origin-Insertion Technique: Here done on the longissimus dorsi muscle	115
6.1	Relaxation Massage Routine	120
6.2	Lowering the Head: Relaxation routine.	121
6.3	Ear Work: Relaxation routine.	122
6.4	Neck Crest Work: Relaxation routine.	123
6.5	Neck Rocking Movement: First part, relaxation routine.....	124

6.6	Neck Rocking Movement: Second part, relaxation routine	124
6.7	Withers Work: Light pressure, relaxation routine....	125
6.8	Back Work: Relaxation routine	125
6.9	Picking up the Tail Movement: From the tail work group of moves, relaxation routine	126
6.10	Raising the Tail Movement: From the tail work group of moves (stretch the ventral aspect of the tail), relaxation routine	127
6.11	Question Mark Movement: From the tail work group of moves (stretch the dorsal aspect of the tail), relaxation routine	127
6.12	Clockwise Movement: From the tail work group of moves, relaxation routine	128
6.13	Counterclockwise Movement: From the tail work group of moves, relaxation routine	128
6.14	Stretching the Tail Out: Carefully and gently working each vertebra with soft muscle squeezing moves, relaxation routine.....	129
6.15	Stroking the Legs Down: End of relaxation routine	130
6.16	Head Massage Routine	132
6.17	Working the Muzzle: First pass, head massage routine.....	133
6.18	Working the Base of Ears: First pass, head massage routine.....	134
6.19	Working the Forehead: Second pass, head massage routine.....	135
6.20	Drainage to the Sides: Second pass, head massage routine.....	135
6.21	Working the Mouth: Gums and bars, third pass, head massage routine	136
6.22	Finishing the Facial Work with Lots of Drainage: Third pass, head massage routine	137
6.23	Maintenance Massage Routine	138
6.24	Neck Work: With deep double-thumb kneading, maintenance routine	139
6.25	Withers Work: With deep double-thumb kneading, interspersed with effleurage, maintenance routine	139
6.26	Shoulder Work: With deep double-thumb kneading, interspersed with effleurage, maintenance routine	140
6.27	Chest Work: With muscle squeezing and thumb kneading, interspersed with effleurage, maintenance routine	141

xiv List of Figures

6.28	Back Work: With deep double-thumb kneading, interspersed with effleurage, maintenance routine	142
6.29	Hindquarter Work: With deep palmar compression, interspersed with effleurage, maintenance routine	142
6.30	Recuperation Massage Routine	145
6.31	Thorough Effleurage: Going up the legs (light to medium pressure), the recuperation routine.....	146
6.32	Multiple Effleurages: Light to medium pressure over the whole body, the recuperation routine	147
6.33	Warm-Up/Cool-Down Massage Routine.....	148
6.34	Fine Shaking: Performed thoroughly over the whole body, with heavier pressure over large, bulky muscle groups to stir up blood circulation, warm-up routine	149
6.35	Thorough Effleurage: Light to medium pressure to assist the circulation and drainage of fluids, cool-down routine	150
7.1	Foreleg Protraction	154
7.2	Foreleg Retraction	156
7.3	Foreleg Abduction	157
7.4	Foreleg Adduction	158
7.5	Hind Leg Protraction.....	159
7.6	Hind Leg Retraction	160
7.7	Hind Leg Abduction	161
7.8	Hind Leg Adduction	162
7.9	Back Extension	163
7.10	Neck Extension	165
7.11	Neck Flexion.....	166
7.12	Lateral Neck Flexion	167
7.13	Stay Mechanism of the Horse	170
8.1	Lateral Bending of the Neck: Duplicate on other side; use a food reward to make the work easier	176
8.2	Neck Flexion: Again, use a food reward	177
8.3	Neck Extension: Progressively bring the head into this position.....	178
8.4	Shoulder Extension Stretch: This protraction stretching movement is good for stretching the flexor muscles of the leg	179
8.5	Shoulder Extension Deep Stretch: This version is done after the initial stretch and allows for extra stretching of the flexor tendon and the suspensory ligament	179

8.6	Shoulder Flexion Stretch: This retraction stretching movement is good for stretching the foreleg extensor muscles.....	180
8.7	Shoulder Flexion Deep Stretch: This version is done after the initial stretch and allows for extra stretching of the extensor tendon and ligament structure of the anterior aspect of the foreleg	180
8.8	Hip Extension Stretch: This protraction stretching movement is good for stretching the flexor muscles of the hind leg	182
8.9	Hip Extension Deep Stretch: This version is done following the initial stretch and allows for extra stretching of the flexor tendon and the suspensory ligament.....	182
8.10	Hip Flexion Stretch: This retraction stretching movement is good for stretching the extensor muscles of the hind leg	183
8.11	Hip Flexion Deep Stretch: This version is done after the initial stretch and allows for extra stretching of the extensor tendon and ligament structures of the anterior aspect of the hind leg	183
8.12	Quadriceps Stretch: This special stretching movement is good for stretching the quadriceps and gluteus muscle groups.....	184
8.13	Back Stretching.....	185
8.14	Back Muscles Stretch	185
8.15	Tail Stretch	186
9.1	Float Line Diagram.....	194
10.1	Superficial Muscle Layer with Stress Point Location	197
10.2	Front Muscles with Stress Point Location.....	198
10.3	Back Muscles with Stress Point Location.....	199
10.4	Deep Muscle Layer with Stress Point Location.....	200
10.5	Head and Neck Section (Deep and Superficial Muscle Layers) with Associated Stress Point Location	201
10.6	Shoulder and Foreleg Section (Deep and Superficial Muscle Layers) with Associated Stress Point Location.....	205
10.7	Back and Rib Cage Section (Deep and Superficial Muscle Layers) with Associated Stress Point Location.....	214
10.8	Hindquarter Section (Deep and Superficial Muscle Layers) with Associated Stress Point Location	219

xvi List of Figures

10.9	Stress Point Location Chart, Side View.....	228
10.10	Stress Point Location Chart, Front/Rear View.....	231
10.11	The “Trouble Spots” Routine Outline	235
11.1	Superficial Fascial Layer Illustrated as a Stocking ...	246
11.2	Fascial Covering of Muscle, Muscle Fibers, and Bundles.....	247
11.3	Fascial Denomination.....	248
11.4	Double-Hands Friction Technique Done Over the Neck	254
11.5	Cross-Hands Technique Over Back	256
11.6	Cross-Hands Technique Using Fingertips	256
11.7	Stroking Technique Over Neck.....	257
11.8	Hand Pressure Technique Over Lower Neck.....	258
12.1	Bones of the TMJ	261
12.2	Lateral View of the TMJ.....	262
12.3	Nerve Supply of the TMJ	263
12.4	Arteries of the TMJ.....	264
12.5	Veins of the TMJ.....	265
12.6	Muscles of the Jaw, Deep	266
12.7	Muscles of the Jaw, Superficial.....	267
12.8	Healthy TMJ.....	269
12.9	Caudal Lesion of the TMJ.....	269
12.10	Rostral Lesion of the TMJ	270
12.11	Checking Incisor Teeth	272
12.12	Kneading of the Cheeks	274
12.13	Finger Friction of Cheeks A, B, and C	275
12.14	Ear Pulling.....	276
12.15	Jaw Rocking: Right side of the horse	277
13.1	The Spine and Skull	279
13.2	Relationship Between the Three Articulations.....	280
13.3	Lines of Compensation Network	281
13.4	Diagonal Lines of Compensation Between Skull and Shoulders	282
13.5	Diagonal Lines of Compensation Between Shoulders and Hips.....	283
13.6	Diagonal Lines of Compensation Between Skull and Hips	284
13.7	Diagonal Lines of Compensation Summary	285
13.8	Transversal Lines of Compensation	286
13.9	Side Lines of Compensation.....	288
13.10	Transversal and Side Lines of Compensation Summary	290
13.11	External Lines of Compensation Summary with the Center of Gravity	292
13.12	Internal Lines of Compensation.....	293

13.13	Internal Lines with Transversal and Side Lines of Compensation.....	294
13.14	Internal and External Lines of Compensation with Center of Gravity	297
14.1	A Horse's Center of Gravity.....	299
16.1	Case Study.....	322
16.2	Example of Filled-out Case Study.....	323