

U.S. Masters International Track Team

David H.R. Pain, Director
Helen L. Pain, Co-director



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Dear Fellow Team Members:

August 14, 1972

Helen and I have been working frantically to complete arrangements for our European sojourn. Naturally we have received a flurry of letters, telegrams, and telephone calls regarding last minute arrangements, entries, hotels, meetings and the like. We hope we can, and have, accommodated everyone. **TAKE NOTE OF THE FOLLOWING INFORMATION JUST RECEIVED:** [ALSO SEE LATE NOTE LAST PAGE.] **IMPORTANT!**

Final Departure Instructions:

After much haranguing and disputation, T.I.A. has agreed to move our departure time from Oakland International Airport to 0800 which will require your arrival at the T.I.A. check-in desk at 0600 on Sunday, August 20, 1972, where you will pick up your ticket[s]. For those of you boarding in Boston; you must check-in at 1400, at the Air France Check-in Counter, Logan International Airport, Boston, phone (617) 567-2382. Our flight will arrive Boston at 1600, to depart Boston 1730 hours, and arrive London 0530 Monday morning. We are still attempting to modify the return flight on September 17th from Köln presently scheduled for departure at 2000 (8:00 p.m.) which will put us in Oakland 0700 Monday morning, September 18th. Since the marathon will be over at the latest by 6:00 p.m., on Saturday the 16th, we have notified T.I.A. that we will agree to a departure as early as 2200 hours Saturday, September 16th. It is therefore incumbent upon you to reconfirm with us personally in Köln, or by calling Inter. Aircraft Services check-in counter, at Wahn Airport Köln. The burden is on you to reconfirm the departure time from Köln. Do not assume that the departure time from Köln will be as listed herein.

Revised Hotel Itinerary:

LONDON	8/21 - 8/26	Regent Centre Hotel, Carburton St, London W-1, Eng.
HELSINKI	8/26 - 8/30	Hotel Valli, #3 Raugalamintie, Helsinki 55, Finl.
STOCKHOLM	8/31 - 9/2	Hotel Triangeln, Vidangsvagen #9, Bromma, Stockholm
SARPSBORG	9/2 - 9/3	Headquarters: Hotel Saga, 1700 Sarpsborg, Sarpsborg, Norway
	9/4	SAS Globetrotter Hotel, near airport, Oslo
GOTEBORG	9/5 - 9/8	Hotel Carl Johan, 66-70 Carl Johansgatan, Goteborg, Sweden
COPENHAGEN	9/8 - 9/11	Hotel Five Svaner, 29 Taasingegade, Copenhagen, Denm.
COLOGNE	9/11 - 9/17	Headquarters: Esso Motor Hotel, Durener Strasse # 287, Lindenthal, Köln 5, West Germany Schwan Hotel, Durener Strasse # 235, Lindenthal, Köln 5, West Germany Bremer Hotel, Durener Strasse, # 225, Lindenthal, Köln 5, West Germany The Regent Hotel, Melaten Gurtel # 15, Bransfeld, Köln 5, West Germany

Meet Entries:

As a result of our last (7/25/72) Newsletter with entries for London and Köln listed, we have received many requests for changes. These requests have been acted upon. Any request received after August 6, 1972, (and there have been several) will have to wait until our arrival in Europe. Submit any desired changes in writing so we have a record. See revised entry lists for London and Köln attached to this Newsletter.

Relay Teams:

These are the revised Relay Teams, still subject to adjustment at the last minute. Our Division I 4x100 Relay has been fortified by the addition of Thane Baker, (40) Dallas, Texas, '52 and '56 U.S. Olympic Teams. Thane missed the AAU Masters due to a hamstring but on July 15th he did a 9.8 W/A 100yd. and 22.2 220yd. which makes him the U.S. top Master sprinter.

DIVISION I - 4 X 400

<u>"A" Team</u>	<u>"B" Team</u>	<u>"C" Team</u>
Stolpe 52.0	Sieben 53.3	Grant 57.0
Fitzgerald 52.3	Puterbaugh 53.7	Wallace 25.1 (200m)
Greenwood 23.6 (200m)	Rademaker 55.0	Stock 57.4 alt Hutchinson 59.0
Dawkins 52.9	Juilland 56.3	McVeigh 57.8 alt.Boise 60 +/-
alt. Sieben 53.3	alt. Grant 57.0	alt. Koerner 58.3 alt.P.Wood 61.9

DIVISION I - 4 X 100

<u>"A" Team</u>	<u>"B" Team</u>
Baker 9.8 W/A 100Y	Schlegel 10.5 100Y
Stolpe 11.2 100m.	Rademaker 10.6 "
Greenwood 15.6 110mH.	Juilland 10.7 "
Dawkins 10.5 "	Grant 10.8 "
alt. Schlegel 10.5 "	alt. Chado 10.8 "
	alt. Donnelly 11.5 "

DIVISION II - 4 X 100

<u>"A" Team</u>	<u>"B" Team</u>
Sharp 18.8 (110mH)	Reiner 11.8 100Y
Guidet 11.1/12.3	Heard 12.1 "
Morcom 26.8 (220)	Cranston 12.8 "
Knuppel 56.4 (440)	Hutchinson, J. 12.3
	alt. Paton N.T.

DIVISION II - 4 X 400

<u>"A" Team</u>	<u>"B" Team</u>
Guidet 66.7 (400mH)	Waterman 59.0
Halpin 58.3 (400m)	Pain 60.1
Knuppel 56.4 (440)	Hutchinson, J. 63.5
Morcom 58.6	Long 63.5
alt. Waterman 59.0	alt. Reiner

DIVISION III 4X100

Thompson 13.2
Hills 13.7
Carnine 14.0
Puglizevich 14.5
alt. Lum 15.5
alt. Bredenbeck NT
alt. Partridge 15.0
alt. O'Neil

DIVISION III 4X400

Deacon 67. +/-
Thompson 68.4
Carnine 68.4
Clarke, J.M. 69.3
alt. Boal 70. +/-
alt. Bierlein 72.7
alt. Hills 73.5
alt. Bredenbeck NT

Hotels - London:

The St. James has moved us to a brand new, more luxurious hotel near Regents Park. It is the Regent Centre Hotel, Carburton Street, London W-1.

Drop-Outs:

We must regretfully report several of our U.S. Masters have been forced to drop out of the tour due to injury. Those so unfortunate are: Rus Niblock (II), Seattle, bad leg; Don Cheek (I), L.A., hamstring; Harold Elrick (II), San Diego, broken leg (fell on curb of track); Gene Kamrass (I), Denver, bad knee and Achilles; and Tom Sturak (I), L.A., bad back. All of these people are dedicated U.S. Masters and have trained long and hard to make the trip. We are distressed to learn of their injuries and hope they can make our next trip in good shape. All of those forced to drop out would have made a singular contribution to the team and we are distressed at their absence. Bob Ulsh and Stan Thompson have been required to withdraw due to business. They will be missed also. We have now used up all our available stand-by people and if anyone drops out now there will be no refund.

Track Events Stockholm:

Our Stockholm sponsors have added to the 3 loop (4, 8, & 12 Km) cross-country event the 100m., 1500m., long jump and shot. We have asked they add the discus and javelin plus the relays. If you planned to skip Stockholm, don't - you are already entered.

Our Danish friend, Dr. Peter Schnohr is reported to have concluded that: "After the age of 50, former athletes are no fitter than ordinary people. This is the conclusion of a Danish physician, Dr. Peter Schnohr of a Copenhagen hospital, who has just surveyed the lives and deaths of 297 sports champions who were born between 1880 and 1910. After the age of 50, the subjects died at the same rate from the same types of diseases as anyone else. Between the ages of 25 and 50, Dr. Schnohr found, the athletes' death rate was 39 percent below the average." [Forum World Features] This story demonstrates the importance of continued exercise. Being a top athlete and then dropping out is no insurance of longevity.

Eastern Masters:

The 4th Eastern Masters held 7/22/72, Randall's Island, New York, shows our eastern U.S. Masters performed very well as indicated:

Long Jump	40-49	1. Roy Chernock 18'5 1/2"	50-59	1. Richard Morcom 19'5 3/4"
16# Hammer	40-49	3. Leonard Olsen 122'11"	60 +	1. Phil Partridge 76' 10"
16# Shot	40-49	1. Leonard Olsen 45'5"	60 +	1. Phil Partridge 26'1 1/2"
High Jump	40-49	3. Harold Colen 4'4"	50-59	1. Richard Morcom 4'8"
				2. George Braceland 4'8"

Javelin	40-49	1. Leonard Olsen 145'8"		
	50-59	1. Jon Hutchinson 88'10"	60 +	1. Phil Partridge 114'11"
		2. Richard Morcom 81'8"		2. Claude Hills 87'9"
2-Mile Run	40-49	2. Walt McConnell 11:09.9	50-59	3. George Braceland 13:35.4
880 Yd Run	40-49	3. Robert G. Fine 2:22.4		
2-Mile Walk	50-59	2. Don E. Johnson 18:44	50-59	3. George Braceland 19:46.5
100 Yd Dash	50-59	2. Jon Hutchinson 12.3	60 +	1. Claude Hills 13.7
440 Yd Dash	50-59	2. Jon Hutchinson 63.5		

British Vets Championships:

Results of the British Vets Championships give us some indication of what we can expect from them. Their strength in the distance events comes as no surprise.

400m. Hurd.	1. Dixon, J.A. 59.4; 2. Whittaker, K.M. 66.6
1,500m. (40-44)	1. Kilmartin, T. 4:8.4; 2. Morris, P. 4:23.8; 3. Hughes, A. 4:28.4.
100m. (40-44)	1. Howarth, D.R. 11:7; 2. Whittaker, K.M. 11.9
5,000m. (over 50)	1. Ashcroft, N. 18:8.0; 2. Salisbury, R. 18.10
5,000m. (45-49)	1. Phipps, G.A. 16:14; 2. Hall, D.K. 16:45; 3. Fitzgerald, J.F. 17:15.8; 4. Caddy, J. 17:32.8
200m. (40-44)	1. Whittaker, K.A. 23.5; 2. Higgins, F.P. 23.7
800m. (40-45)	1. Stevens, P.A. 2:6.8; 2. Colson, R. 2:7.1; 3. Field, P. 2:7.3
800m. (45&over)	1. Bruns, K.C. 2:30.1;
3,000m. Walk	1. Barraclough, J. 13:26.6
200m. (over 50)	1. Fairey, C.T.R. 27.1
3,000m. Steeple Hammer	1. Hill, W.S.T. 10:44.4
1500m. (over 45)	1. O'Neill, A. 44.24m (145')
Discus	1. Phipps, G. 4:32.2
400m. (over 45)	1. O'Neill, A. 41.0m. (134'6")
400m. (40-44)	1. Munn, P. 58.9
5,000m. (40-44)	1. Higgins, F.P. 52.6 1. O'Hara, L. 14:53.6; 2. Stoddart, W. 15:18; 3. Walsham, A. 15:43.8; 4. Stewart 15:47.8; 5. Rooke, T. 15:52.8; 6. Morris, P. 15:58.8

Events Gothenburg:

All standard events 100m. - 5,000m., and all field events plus 8,000m. cross-country in Slottsskagen.

Report From Canada:

Our man in Toronto, Don Farquharson, reports fine efforts from several of his Maple Leaf athletes, namely:

"Ontario Results

"June 15th Bill Allen 10,000 Metres open meet - 31.38.0 New Canadian Record
Art Taylor 5,000 Metres same meet - 16.02

"Centennial Stadium Allcomers 3 Miles

1. Bill Allen	16.32	2. John Reeves	17.18.6	3. Bill Cameron	18.21.1
4. Fred Pritchard	19.20.8	5. Elwyn Davies	19.43.0	6. Milt Wallace	21.00.8

"June 24th Birchmount Stadium 1,500 Metres

1. Cliff Hall	4.28.7	2. Art Taylor	4.33.5	3. Jack Gray	4.39.0
4. Frank Galata	4.40.0	5. Don Farquharson	4.58.0	6. Bob Bowman	5.10.6 (inj)
7. Elwyn Davies	5.13.0	8. John Nolan	5.13.1	9. Jim Parks	5.32.2
10. Ken Hignell	5.45.3	11. Roy Berrand	5.46.0		

"Extra The 1 mile at the Highland Games, Oshawa before a crowd of 7,000 produced a new Canadian mile record. Bill Allen led throughout with a 65 1st quarter, 2.11 half (by which time only Cliff Hall was still hanging on) 3.23 3/4's (alone) and a final of 4:33.7." [Excerpted from Canadian Masters Newsletter.]

LATE NOTE: Urban Miller, Köln, requests reproducible negatives of each member of the team for program and publicity. Please send negative and print airmail to:

SEE YOU AT MARIN COLLEGE THIS SATURDAY,

David
DAVID H. R. PAIN

URBAN MILLER
5083 Hahnwald
Im Hasengarten #42, W. Germany

[overseas air mail 21¢ half ounce]

LONDON

	DIVISION I	DIVISION II	DIVISION III
100m.	Baker, Boise, Donnelly, Schlegel, Stolpe, Juilland	Cranston, Guidet, Hutchinson, McNeice, Sutherst (Can.)	Carnine, Hills, Lum, O'Neil L., Puglizevich
200m.	Baker, Boise, Chado, Dawkins, Grant, Radamaker, Wallace, Greenwood, Stolpe, Juilland	Cranston, Guidet, Hutchinson, Knuppel, Reiner, Sharp, Sutherst (Can.)	Carnine, Hills, Lum, Partridge, Puglizevich
400m.	Boise, Cameron, Dawkins, Fitzgerald, Grant, Guidet, Hutchinson J., Peters, Puterbaugh, Radamaker, Siebens, Stolpe, Wallace, Greenwood, McVeigh	Halpin, Hargus, Hutchinson, Knuppel, Reiner	Bierlein, Bredenbeck, Deacon, Fowler
800m.	Allen, Anspach, Cameron, Fine, Fitzgerald, Hutchinson J., Koerner, McVeigh, Puterbaugh, Siebens, Stock, Wood, P.	Gordon, Halpin, Knuppel, Pain, Paton, Smith E.	Bierlein, Boal R.S., Clarke, Lum, Williams
1,500m.	Allen, Anspach, Chado, Fine, Fitzgerald, Gookin, Koerner, Mundle, Ward P., Yehnert	Garcia, Gordon, Pain, Paton, Smith E.	Anberg, Bigelow, Boal, R.S., Bright, Clarke, Deacon, Williams
400m. Int. Hurdles	Greenwood, Radamaker, Stock	Guidet, McNeice, Reiner, Sharp	Thompson
3,000m. Steeple	Higdon, Mundle, McConnell, Packard, Parnell, Richards, Stock	Lowell, McNeice	Thompson
5,000m.	Anspach, Gavras, Gookin(15:27), Hamilton, Hartshorne, Higdon(15:30), McConnell, O'Neil J., Packard(15:49), Parnell, Richards, Stock, White, Wood P., Yehnert	Garcia, Hargus, Lafferty, Long, Morrison, Paton, Steiner, Zook	Anberg, Bigelow, Bright, Bredenbeck, Hardick, Miller, Tomanaha, Williams
15 Km. Walk	Gershuny, Wood A.	Braceland, Johnson, Long, Steiner	Laitinen, O'Neil L., Fowler
4x100m. Relay	Chado(10.8), Dawkins, Donnelly(11.5), Greenwood, Guidet, Juilland, Schlegel, Stolpe	Aldrich, Cranston, Guidet, Heard, Morcom, Peiner	Bredenbeck, Carnine(14.0),
4x400m. Relay	Baker, Boise, Dawkins, Fine(alt), Fitzgerald, Friberg(alt), Grant, Greenwood, Hartshorne, Hutchinson J., Koerner(58.3), Juilland, McVeigh, Peters(alt), Puterbaugh, Radamaker, Stock(alt), Stolpe, Siebens, Wallace(55.1), Wood P.(alt).	Gordon, Guidet, Halpin(58.3), Hargus, Hutchinson, Knuppel, Long, Morcom, McNeice, Pain, Paton, Reiner, Smith E.	Bierlein(72.7), Boal R.S., Bredenbeck, Clarke(69.3), Deacon(67+), Thompson
Cross-Country	Allen, Anspach, Boise, Cameron, Chado, Fine, Gavras, Gershuny, Hamilton, Hartshorne, Higdon, Hutchinson J., Koerner, Mundle, McConnell, McVeigh, O'Neil J., Packard, Puterbaugh, Siebens, Stock, Wallace, White, Yehnert	Braceland, Garcia, Gordon, Halpin, Hargus, Hutchinson, Johnson, Knuppel, Lafferty, Long, Morrison, Pain, Paton, Sharp, Smith E., McNeice, Steiner, Zook	Anberg, Boal R.S., Bright, Fowler(Div 4), Hardick, Laitinen, Hills, Deacon, Miller, O'Neil L., Tomanaha, Williams
Epping Forest			
High Jump	Donnelly, Friberg, Olson, Colen, Juilland, Peters, Ruth (Can.)	Braceland, Lowell, Morcom, Sharp, Siefert	Bierlein, Bigelow, Deacon, Hills, McFadden, Puglizevich, Thompson
Long Jump	Chado, Colen, Dawkins, Donnelly, Grant, Schlegel,	Morcom, McNeice, Seymour, Sharp	Deacon, Hills, Lum, McFadden, Partridge, Puglizevich, Thompson
Triple Jump	Colen, Dawkins, Donnelly, Grant, Schlegel, Ruth(Can.)	Long, Lowell, Morcom, Sharp	Deacon, Hills, McFadden, Partridge, Thompson
Pole Vault	Brown D., Friberg, Peters, Colen, Ruth (Can.)	Braceland, Kilbuck, Morcom	Deacon, Hills, Thompson
Shot Put	Olson, Peters	Aldrich, Braceland, Buell, Heard, Kilbuck, Pain, Siefert	Carnine, Nichols, Partridge, Puglizevich
Discus	Chado, Olson, Wallace	Aldrich, Braceland, Heard, Kilbuck, Seymour, Siefert	Carnine, McFadden, Nichols, Partridge, Puglizevich
Hammer	Olson	Heard	O'Neil L., Partridge, Nichols
Javelin	Chado, Hutchinson J., Olson, Wallace	Aldrich, Heard, Kilbuck, Seymour, Siefert	Carnine, Nichols, Partridge

ASV - KÖLN

	DIVISION I	DIVISION II	DIVISION III
100m.	Baker, Boise, Dawkins, DeVallance, Grant, Schlegel, Spanjers, Ruth(Can.)	Guidet, Juilland, McNeice, Sjostrand	Carnine, Hills, Lum, Partridge, Puglizevich, Fowler (Div.4)
200m.	Baker, Boise, Chado, Dawkins, DeVallance, Grant, Greenwood, McKinlay, Spanjers, Stolpe, Radamaker, Wallace	Guidet, Juilland, Knuppel, Reiner, Sharp, Sjostrand	Carnine, Hills, Lum, Partridge, Puglizevich, Fowler (Div.4)
400m.	Boise, Cameron, Dawkins, Hershberger, Hutchinson J., Koerner, Peters, McVeigh, Puterbaugh, Sieben, Spanjers, Stolpe, Wallace	Halpin, Knuppel, Sjostrand, Smith E.	Bierlein, Bredenbeck, Carnine, Deacon, Hill, Puglizevich, Fowler(Div.4)
800m.	Anspach, Cameron, Fitzgerald, Hershberger, Hutchinson J., McKinley, Puterbaugh, McVeigh, Sieben, Stock, Wood P.	Gordon, Halpin, Knuppel Paton, Waterman	Bierlein, Bredenbeck, Clarke, Lum, Williams
1500m.	Anspach, Chado, Fine, Fitzgerald, Gewecke, Gookin, Koerner, Mundle, McConnell, Packard, Stock, Wood P., Yehnert	Garcia, Gordon, Pain, Paton, Smith E., Waterman	Andberg, Bigelow, Boal R.S., Bredenbeck, Bright, Deacon, Williams
3 Mi Run	Clarke, Friberg, Gavras, Gewecke, Hamilton, Hart-Shorne, McConnell, O'Neil J., Packard, Parnell, Richards, White, Yehnert	Morrison, Long, Lafferty, Paton, Steiner, Zook	Andberg, Bright, Hardick, Miller, Tamanaha, Williams
400m. Hurd.	Greenwood, Radamaker Stock	Guidet, Reiner, Sharp	Thompson
110m. Hurd.	Grant, Greenwood, Radamaker	McNeice, Reiner, Sharp	Thompson
3,000m. Steeple	Mundle, Parnell, Richards, Stock		Thompson
4X100m. Relay	Baker, DeVallance, Grant, Greenwood, Hershberger, Schlegel, Stolpe	Guidet, Heard, Juilland, McNeice	Bierlien, Bredenbeck, Carnine, Hills, Lum, Partridge, Puglizevich, Thompson
4X400m. Relay	Boise, Dawkins, Fitzgerald, Friberg, Hershberger, Hutchinson J., Puterbaugh, Radamaker, Wallace, Sieben, McVeigh, Greenwood, Stolpe, Grant	Garcia, Gordon, Guidet, Halpin, Juilland, Knuppel, Morcom, Pain, Reiner, Smith E., Sjostrand, Waterman	Bierlein, Boal R.S., Clarke J.M., Deacon, Thompson
Hammer	Olson	Heard	Nichols, O'Neil L., Partridge
Long Jump	Grant, Schlegel, Colen Dawkins, Ruth (Can.)	Morcom, McNeice, Seymour Sharp	Deacon, Hills, Lum, Partridge, Puglizevich, McFadden, Thompson
Pole Vault	Brown D., Colen, Friberg, Peters, Ruth (Can.) (15'0")	Braceland, Kilbuck, Morcom,	Deacon, Hills
Javelin	Chado, Olson, Wallace	Heard, Kilbuck, Seymour Siefert	Carnine, Nichols, Partridge, Thompson
High Jump	Colen, Peters Ruth (Can.)	Braceland, Juilland, Morcom, Sharp, Siefert	Bierlein, Bigelow, Deacon Hills, Puglizevich, McFadden, Thompson
Discus	Chado, Olson, Wallace	Braceland, Heard, Kilbuck, Seymour, Siefert	Carnine, Nichols, Partridge, McFadden
Shot Put	Farquharson (Can.), Olson (16# 45'5") Peters (16# 32')	Aldrich (12# 42' 1/2"), Braceland (12# 30'7"), Heard (12# 50'4"), Kilbuck (16# 31'6"), Pain (12# 30'), Seymour (12# 41'7"), Siefert (12# 38'2")	Carnine (8# 40'8") McFadden (8# 31' 1/2") Nichols (8# 37'10") Partridge (8# 34'9", 16# 26'1/2") Puglizevich (8# 45')
10 Km. Walk	Gershuny, White, Wood A.	Braceland, Gould (Can.) Johnson, Long, Steiner	Laitinen, O'Neil L., Williams, Fowler (Div.4)

Look What They're Doing for Jet Fatigue!

An authority on body rhythms throws new light on this unhappy side effect of east-west jet travel

BY GAY GAER LUCE

ILLUSTRATION BY EUGENE MIHAESCO

Most air travelers are all too familiar with the symptoms of jet fatigue. After an exuberant departure, the traveler to Europe or the Orient reaches his destination only to find himself drooping with exhaustion by day, unable to sleep at night and voraciously hungry just when all the local restaurants have closed for the night. Additional symptoms may include nervous irritability, headaches and a general feeling of not being "all together." These "jet lag" symptoms may be of relatively short duration or they may persist for days.

A growing body of scientific research is giving us new insights into the causes of jet fatigue and the techniques that can be employed to combat it. Many bodily functions are thrown out of phase when a traveler moves rapidly through a number of time zones in traveling from east to west or vice versa.

A businessman from New York, for example, who leaves on a flight for Paris at 7 P.M. will cross six time zones before arriving at Orly airport at 1 A.M. New York time. In Paris, however, the local time will be 7 A.M., and if our businessman is wise, he will undertake no business dealings during his first day in France. Not only will he be suffering from the effect of little or no sleep during the night flight to Europe, if he possesses a normal constitution, all of his bodily functions—metabolism, body temperature, heartbeat, to name a few—will be at their early-morning nadir for most of his first day in Paris. Our traveler's body will be out of phase with local clock time, and if he rushes off to a business engagement at 10 A.M., he will find himself negotiating important matters while his body is idling along in its usual comatose 4 A.M. condition. This desynchrony is one of the annoying—sometimes debilitating—effects of east-west air travel.

To protect his comfort, health and general efficiency, the modern traveler needs to know and use the rhythms within his own body. The human body undergoes regular internal changes on a rhythmic, 24-hour schedule. These daily changes are known as circadian rhythms from the Latin *circa dies*, meaning "about a day." Although we have many shorter rhythms such as the heartbeat, and longer rhythms such as the

Gay Gaer Luce's recent book Body Time is a detailed study of physiological rhythms and how stress affects them.

menstrual cycle, the day is our most important temporal unit. Circadian rhythms pulsate throughout our flesh and behavior.

Our bodies resemble complex factories whose smoothness of function comes from an elaborate production schedule. Timing and inventory control are essential for us to metabolize food. In order for our hearts to beat, some internal production line must send a chemical to the heart nerves at the precise moment when needed so that it will contract on time. By day the heart beats somewhat faster than it does at night during sleep. Body temperature also rises and falls each 24 hours, dropping a degree or two at night and shooting up rapidly in the early morning just before or after awakening. Tides of brain chemicals and hormones rise and fall, helping us to become alert by day, sleepy by night. Liver enzymes become more active at certain hours, allowing us to utilize the food we eat rather than to be poisoned by it. Throughout our daily lives millions of biochemicals are surging into exactly the right tissues at the right times in a harmony that makes us feel "together." Our feelings, sensitivity, the way we behave, our strength and our vulnerability to shock, infection or toxins are not the same at all hours of day and night.

As we have seen, by traveling east or west we find ourselves eating and sleeping on local times while important parts of our bodies are still functioning on home time. Because different functions of the body adapt at varying rates—some instantly while others take three weeks or longer—our internal functions become out of phase with each other. The circadian rise and fall of heart rate may take from four to eight days to adjust to our new daily routine. Although protein metabolism appears to adapt immediately, the rise and fall of body temperature does not adapt to our new tempo for at least eight days. Worst of all, important adrenal hormone rhythms which control such functions as metabolism, energy levels and sensory acuity, may remain abnormally damped for up to three weeks. Thus some vacationers quite reasonably complain of malaise and exhaustion even while luxuriating at a glorious resort.

Desynchronization may be more than just uncomfortable. Physiologists in a Minneapolis laboratory have shortened the life span of rodents merely by inverting their

light schedule once a week (analogous to a weekly flight from the United States to Japan). Nobody knows whether repeated east-west flying shortens human life, but flight medicine experts have speculated that it may eventually cause illness.

Flight crews on many of the world's major airlines now maintain their "home" schedule to avoid jet fatigue problems. It may be shopping time in Hong Kong, but if the flight crew members are based in San Francisco and it is after midnight at home, they go to bed. TWA and Pan American crews have had an easier time on their rapid, around-the-world trips than BOAC crews who are on a three-day stopover schedule. Apparently, unless there is a lengthy period to adjust after a long journey, it is easier not to attempt to adjust at all.

Businessmen and diplomats often do not have this option, and the errors they may make while suffering "time shock" can be costly. As

former Secretary of State John Foster Dulles lay dying in Walter Reed Hospital he told columnist Marquid Childs that, in retrospect, one of his major errors—refusal to help Egypt with the Aswan Dam project—was a direct result of travel desynchronization. State Department officials are now counseled to consider time change when they travel.

More than 130 countries take advice from the International Civil Aviation Organization based in Montreal. The ICAO has worked out a formula that tells travelers the

amount of rest they need to compensate for sleep loss and desynchronization incurred on any given flight. Anyone flying from Montreal to Karachi and back for instance, would be instructed to place himself in "cold storage" for two and a half days at either end. In our previously quoted example of a night flight from New York to Paris, the traveler would be advised to take a full 24 hours' rest, but if he had taken a

daytime flight, leaving New York at 9 A.M., he would require only a half day's rest. Whether they utilize this formula or not, a number of American and foreign firms, led by Timken Roller Bearing and Phillips Petroleum in the United States, now urge their employees to rest for a day or more after a lengthy east-west trip before conducting business.

Whether one travels for business or pleasure, there are a number of practical measures that can be taken to ameliorate the jet fatigue of east-west travel. (Unless an appreciable east-west time shift is incurred, north-south travel does not produce jet fatigue.)

• Get as much sleep as possible. Sit by a window, draw the shade and tell the stewardesses that you don't want any food. Get a blanket, pillow and an eye mask. Wear loose, comfortable clothing and carry a pair of wool socks or light slippers for warmth. Remove shoes and anything tight or obtrusive, such as a pipe or a pen. If the plane is noisy,

perform a yoga exercise or simple hypnotic routine such as concentrating on the noise of the jet engines until you relax and drowse.

• Upon arrival, take it easy, but consult local time rather than your body clock in deciding when to go to bed. If, like the businessman in our example, you fly through the night from New York to Paris, you may be tempted to snatch a few hours of sleep after checking into your hotel in the morning. Yet this will only delay adaptation. Better to muddle through the day and use your exhaustion to fall asleep on Paris time early that night.

• Attempt to arrange your flight schedule so as to minimize sleep loss. When flying east to Paris for example, a New Yorker would be well advised to catch a morning flight. One that departs JFK at 9 A.M. would arrive over Orly at 9 P.M. Paris time. If you then retire at midnight (6 P.M. New York time), you will awake the next morning more or less in sync with local time, as far as sleep is concerned.

Jet Fatigue *continued*

• Pre-adapt your body to the time prevailing at your destination. Go to bed progressively earlier each night for three or four nights before an eastbound trip, or progressively later if you are traveling west. Entertainers and athletes have found this method beneficial.

• Establish a routine in sync with local time at your destination as soon as possible if you plan a stay of any duration. It may be difficult to wrench yourself out of bed that first morning, but the sooner you can adjust your body to the new schedule of eating, sleeping and other activities, the sooner you will feel yourself once again.

• Watch your eating habits carefully. Food poses a major travel problem. Travelers often feel hungry at the wrong times. But whenever one eats, it is wise to eat very little—a fraction of one's usual intake. Forget exotic temptations at first and eat familiar foods. To avoid adding extra pounds, eat your largest meal at midday and sup lightly.

• Exercise caution in the use of drugs. It is best to experiment with reduced dosages during a transitional period, for drugs have different effects on the body at different times during the circadian cycle. Ordinarily, stimulants have maximum effect by day, while sedatives or hypnotics have their maximum effect toward the wee hours of the morning, but during the process of time-phase adjustment, these drugs may be metabolized at a different rate than the one to which you are accustomed. Some of your usual drugs may have less effect than you expect while traveling, but others may pack an unexpected wallop. Remember that alcohol is a drug—a powerful depressant—and immoderate use during travel can produce a hangover of heroic proportions and seriously complicate jet fatigue symptoms. All travelers with chronic illnesses, such as diabetics taking insulin and people needing steroid hormones for adrenal ailments or persons taking anticoagulants, should consult their physicians about dosages and timing prior to a trip involving extensive time change.

Finally, one can deal most effectively with all the problems of desynchronization if one knows the beat of one's own physiological clock—one's own unique circadian rhythm. Some people regularly experience a broad physiological and psychological change from day to night. Others, more phlegmatic, can perform or sleep at any hour since their systems change minimally, having a "flatter" rhythm. If you are one of those who experience great variations in your circadian rhythm, you are undoubtedly aware of your "best" and "worst" periods of effectiveness and well-being during your 24-hour cycle. Try to juxtapose your optimum hours of body time against local time when planning business appointments or other activities.

In the not-too-distant future, jet travelers will probably pass through an adaptation lounge where electronic treatments or special drugs will be employed to help shift their body phases into synchrony with local time. Until this comes to pass, it is up to the individual traveler to use his knowledge of his own rhythms in order to exercise moderation in personal habits, choose optimum flight schedules, pre-adapt and plan activity on arrival that will yield him his greatest mental and bodily efficiency—and his maximum comfort and pleasure as well. ■

Adelle Davis' High-Energy Vacation Diet

What to eat and when to eat it if you want the maximum amount of energy for your vacation

Adelle Davis has the reputation of being one of the greatest popular nutritionists of our time. She was asked by this magazine to set down her basic suggestions for diet and nutrition supplements to help American travelers going overseas to achieve their greatest energy potential, since fatigue is a persistent threat to an exciting and pleasant vacation. Her suggestions follow.

—Editor's Note.

Often a vacation one has spent months saving and planning for is all but ruined by fatigue, an infection or an attack of dysentery. Sightseeing is exhausting. To do the Louvre thoroughly, it's rumored that one must walk 22 miles. Yet the continental breakfast of rolls, coffee and marmalade was never designed to promote energy production. Nor are late European dinners conducive to early morning appetites.

To experience a sustained feeling of well-being, one must have a high intake of B vitamins plus approximately 20 grams of protein per meal. This quantity of protein can be supplied by two eggs and a glass of milk or by a large steak or a serving of fish or fowl. It is impossible to feel a high level of energy throughout the day unless one obtains this minimum 20 grams of protein at breakfast. A continental breakfast would supply at most perhaps two to four grams of protein, and even that of reduced biological value, lacking several essential amino acids.

The best food sources that provide both B vitamins and protein are liver and brewers' yeast. When my husband and I travel abroad, I sift together equal parts of food yeast—the best source of B vitamins—and powdered milk which is extremely high in protein. I then package ¼ cup of the mixture in envelopes, convenient for pocket or purse. We each stir an envelope's worth into juice at breakfast and, if we are in Asiatic countries where little protein is served, we use a like amount to supplement our other meals.

Numerous protein powders and

tablets are commercially available, mostly made of powdered milk and soy flour. They are expensive, supply few B vitamins and usually 50 tablets must be eaten to obtain 20 grams of protein. Carry them if you wish, but yeast will give you a far greater pickup.

Many persons object to the flavor of yeast, which is certainly not famous for being palatable. Because yeast can make you feel better throughout the day, however, it seems wise to remember that taste lasts only seconds compared to the benefit of long hours of energy you could derive. I personally use tortula yeast to which calcium and magnesium have been added. If yeast is new to you, other varieties are available at health food stores, and you can experiment until you find the type that you enjoy most.

The best precaution against picking up dysentery (which foreigners visiting us also get) is to eat perhaps one or two cups of yogurt daily for several weeks before and during your vacation. The valuable yogurt bacteria, if heavily implanted in the intestine, break milk sugar into lactic acid that discourages the growth of pathogenic organisms. In case you do not care for yogurt or if none is available, two or three yogurt tablets (each supplying several million bacteria) can be taken daily. Incidentally, a single drop of fresh milk is said to be lethal in parts of the Middle East, whereas yogurt is safe everywhere because of its power to destroy pathogenic organisms.

It is wise to take vitamins with you. An all-in-one supplement, though far from adequate (usually lacking half the B vitamins) will suffice for a short vacation. If you are trying to see a country a day and everything in each country, carry antistress tablets, each furnishing several B vitamins and 100 milligrams of pantothenic acid. Have one with each meal.

By all means, take vitamin C with

you, either powder or 500-milligram tablets. Powdered USP vitamin C is the cheapest. A druggist can usually order it for \$7.50 per kilogram (2.2 pounds). A teaspoonful, supplying four grams, taken daily in juice, or two or more tablets per meal is a wise precaution. In case of an infection or an allergy attack, a teaspoonful of vitamin C or six or eight tablets every two hours often stops either in its tracks.

If one is sensible about nutrition, eating abroad can be a marvelously health-giving experience. In many countries foods are far superior to ours. In Europe, seafoods are particularly abundant and delicious. Few cheeses are processed. Most countries do not stimulate the growth of their beef or poultry by feeding the hormone diethylstilbestrol. Nor do they allow the importation of American meats produced with this hormone.

In many countries, little or no chemical fertilizers or poison sprays are used. The French and German farmers, for example, have been using compost and rotted manures for centuries, and their fruits and vegetables are unbelievably delicious and nutritious. I am told that in Iran, the only place where refined flour is sold is at the commissary of the American Embassy. In many other countries, breads—even though made from white flour—are more delicious than ours because chemical additives are forbidden. Milk is less palatable than in America, but excellent yogurt is available almost everywhere. The fruits and cheeses served for dessert as well as the artistically decorated pastries are hard to resist. If, before you leave home, you bone up on nutrition enough to select your food wisely, and enrich your daily fare with vitamins and other nutritional supplements when necessary, you'll be surprised at how much energy you'll have for your vacation activities.

—ADELLE DAVIS

Changing your dollars into more marks, francs, guilders, lire

Long lines at international exchange windows and dollars that wouldn't buy anything were two immediate consequences of this country's decision last August to let the value of the dollar "float" free from the price of gold.

Unfortunately, American travelers are still living with the heritage of that crisis. Instability in the international monetary system makes exchange rates jump up and down, and on occasion the dollar is still regarded warily. However, there are ways you can handle these problems if you are planning a trip abroad this spring or summer.

Perhaps the best advice was offered by a San Francisco exchange expert, who warned Americans they should give up the lazy habit of paying foreigners in U.S. bills. Use local currency, and don't expect any point-of-purchase money exchange to be to your advantage.

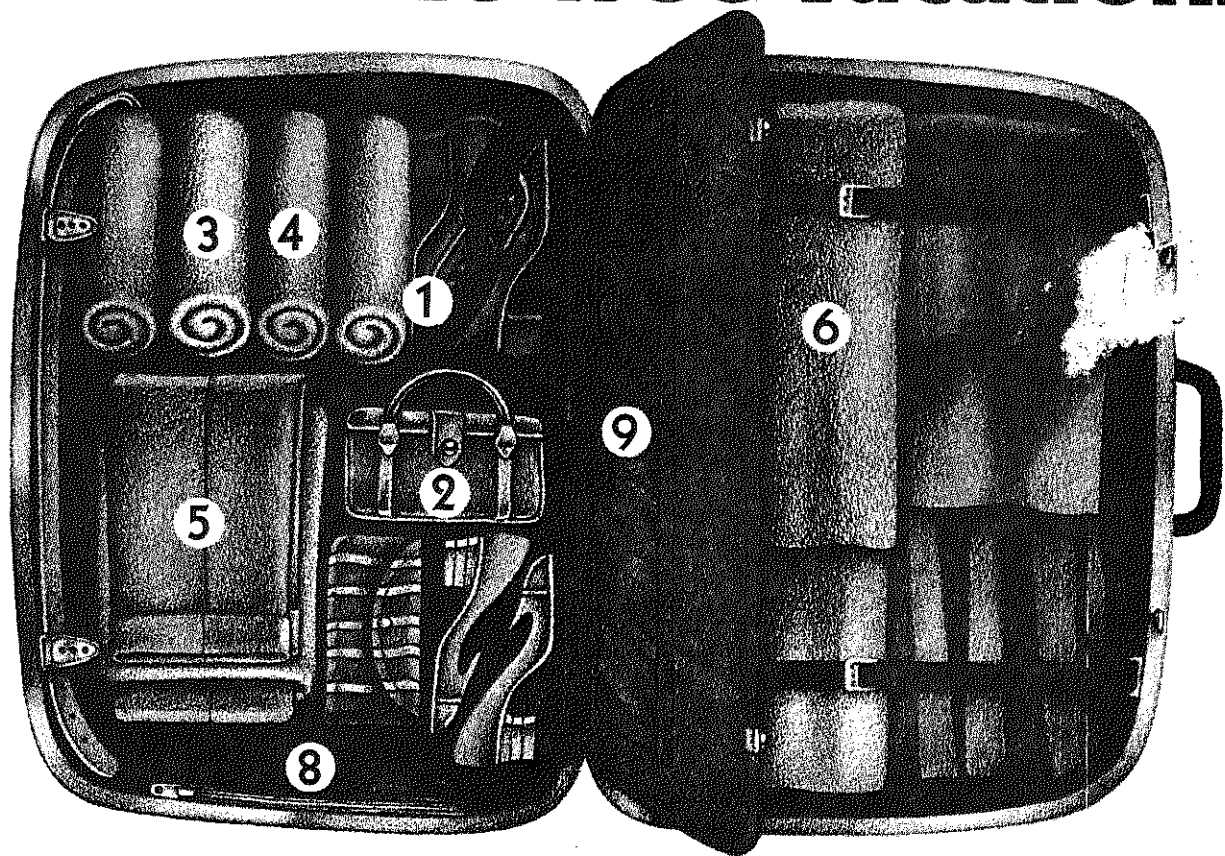
Below are a few other suggestions. If you follow them you may not avoid long lines at exchange windows if there's another monetary crisis, but you may save yourself some money.

Buy money here. If you buy some foreign currency before you leave this country you won't have to worry about being victimized by cab drivers and hotel desk clerks when you arrive. Also, exchange rates are usually better in the United States. For example, recently the dollar could buy 3.23 German marks here and only 3 in Germany.

Most large banks have foreign exchange departments and major airports have bank exchange booths. Check with your travel agent or airline to see how much local currency you may take in with you; some countries have limits.

Take checks. Always buy and use travel-

Samsonite introduces the wrinkle-free vacation.



It's based on the premise that a good bag is even better when it's packed right. So first, the bag.

Our Silhouette luggage is a packer's dream. It opens in the middle so both sides pack flat. Its divider pad holds things down and also holds things. There are side pockets for trivia. And ribbon fasteners that keep your neat folding neat. Now, the packing.

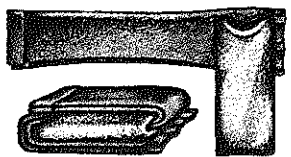
1 SHOES—Place heel-to-toe, resting on hinges of case so they won't shift and crush things.

2 PURSES—Cushion on flat scarves, toward hinges. Fill with stockings, etc. to keep shape. "Heavies" like electric curlers go near hinges, too.

3 LINGERIE & SLEEPWEAR—Fold all lingerie, nightgowns and robes in thirds, following body lines. Place in sets, roll up.

4 BRAS & BATHING SUITS—Fold bra or suit in half, turn one cup inside other. Stuff space with stockings or panties and roll up neatly.

5 SPORTSWEAR—Fold pants lengthwise. Fold sweaters in thirds, lengthwise. Lay at right angles, then fold over each other, alternating, to form a stack. The point is to make rounded, cushioned folds.



6 DRESS & SKIRTS—Fold lengthwise on bed, front down, in thirds on natural curves. Fasten zippers, buttons, and fold sleeves down back. Place in bag one on another, alternating as in drawing.



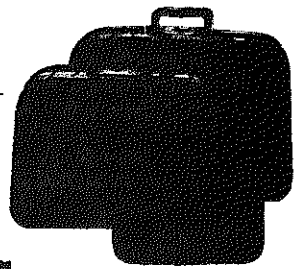
7 REMOVING—If you've packed correctly, you can take out and put back individual garments without disturbing the others.



8 COSMETICS—Take small amounts in plastic containers. Tote or Beauty Case is best, or pack in a makeup kit or our plastic-lined side pouch. Fasten tops securely.

9 ACCESSORIES—Gloves, stockings, scarves, extra jewelry go in divider pocket. Chain belts go in pocket, leather ones stretch around side of case.

10 TAKE SAMSONITE® on your vacation. And take our advice, too. We suggest this 3-piece set of Silhouette in Wild Strawberry. 26 Pullman, \$55; Ladies O'Nite, \$38; Handi-Tote, \$30. Of course we also have luggage sets for men.



We make travel a little easier.

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What to wear

Travel light. Plan wardrobes around a basic color. Concentrate on drip-dry, wrinkle resistant fabrics. Include comfortable walking shoes, rainwear and a bathing suit. The same suits and dresses worn in cities at home will fit in perfectly abroad. Men will be comfortable in a sports jacket or suit in the evenings. Women are advised to save shorts and slacks for beach or poolside wear; Europeans are not always casual in big cities.

Remember, too, that many Catholic churches require visitors to have their arms covered. If it is warm, and you're wearing a short sleeved shirt or sleeveless dress, keep a jacket or cardigan with you

ers' checks. They are usually easier to convert than dollars and frequently command a more favorable rate of exchange. Bundling and shipping paper currency costs a bank or exchange office money, an expense they may pass on to you. Travelers' checks also give you some insurance if there is a serious monetary crisis. Banks and companies like American Express assume an obligation to redeem their own checks. Personal checks are next to useless abroad.

How to exchange. Don't be ashamed to shop around for a good exchange rate, especially if you're changing a large amount of money. Banks usually have the most favorable rate, although there may be substantial variations between them. Exchange offices and travel agencies will also change your money, but usually at a poorer rate than at a bank. Always try to do your business on a

weekday. You may pay for the convenience of changing money on a weekend by getting a poorer rate of exchange or by being charged a fee.

If possible, avoid changing money in hotels, shops, or restaurants. One exception is in France where you may save on some local taxes by buying merchandise with travelers' checks. However, don't be lured by stores advertising exceptionally favorable rates of exchange. They probably inflate their prices to make up the difference.

Credit cards. Internationally known credit cards such as Carte Blanche, American Express, and Diners' Club are good insurance when going abroad. Merchants are paid in local currencies and then the bill is translated by the credit card company into dollars. This way your rate of exchange is likely to be favorable. □